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CHANDRA ACIS SURVEY OF X-RAY POINT SOURCES IN 383 NEARBY GALAXIES I. THE SOURCE CATALOG

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ABSTRACT

The Chandra data archive after eight years' accumulation is a treasure for various studies, and in this paper we exploit this valuable resource to study the X-ray point source populations in nearby galaxies. By December 14, 2007, 383 galaxies within 40 Mpc with isophotal major axis above 1 arcminute have been observed by 626 public ACIS observations, 60% of which are for the first time analyzed by this survey to study the X-ray point sources. Uniform data analysis procedures are applied to the 626 ACIS observations and lead to the detection of 28099 point sources, which belong to 17599 independent sources. These include 8700 sources observed twice or more and 1000 sources observed 10 times or more, providing us a wealth of data to study the long term variability of these X-ray sources. Cross correlation of these sources with galaxy isophotes led to 8519 sources within the D25 isophotes of 351 galaxies, 3305 sources between the D25 and 2D25 isophotes of 309 galaxies, and additionally 5735 sources outside 2D25 isophotes of galaxies. This survey has produced a uniform catalog, by far the largest, of 11824 X-ray point sources within 2D25 isophotes of 380 galaxies with 71% of them reported for the first time. Contamination analysis using the logN-logS relation shows that 74% of sources within 2D25 isophotes above 10^{39} erg s^{-1}, 71% of sources above 10^{38} erg s^{-1}, 63% of sources above 10^{37} erg s^{-1}, and 56% of all sources are truly associated with galaxies. This archival survey leads to 300 ULXs with $L_X(0.3-8\mathrm{keV}) \geq 2\times10^{39}$ erg s^{-1} within D25 isophotes, 179 ULXs between D25 and 2D25 isophotes, and a total of 479 ULXs within 188 host galaxies, with about 324 ULXs truly associated with host galaxies based on the contamination analysis. About 4% of the sources exhibited at least one supersoft phase, and 80 sources are classified as ultraluminous supersoft sources with $L_X(0.3-8\mathrm{keV}) \geq 2\times10^{38}$ erg s^{-1}. With a uniform dataset and good statistics, this survey enables future works on various topics, such as X-ray luminosity functions, and multiwavelength identification and classification.

Subject headings: catalogs – galaxies: general – X-rays: binaries – X-rays: galaxies

1. INTRODUCTION

Starting from the historic discovery of Sco X-1 (Giacconi et al. 1962), X-ray observations of more than forty years (see Pounds 2004 for a review) have revealed a variety of X-ray point sources beyond the solar system in the Milky Way and Magellanic Clouds, including low-mass X-ray binaries, high-mass X-ray binaries, X-ray pulsars, cataclysmic variables, X-ray novae, and X-ray stars. The most energetic X-ray emission comes from the accretion disks around compact objects, follow-up observations of which can lead us to find the intriguing black holes and neutron stars out of zillions of optical objects. Indeed, follow-up optical observations have been able to measure the primary masses for 20 X-ray binaries as above $3M_{\odot}$, which places them securely as black holes (McClintock & Remiliard 2006). Although the bright X-ray sources in the Milky Way are easily studied, many of them are not observable due to the heavy obscuration of the galactic disk, and one must correct for completeness when studying the statistical properties of Galactic X-ray binaries (e.g., Grimm et al. 2002). On the other hand, studies of X-ray binaries in more distant galaxies may be free from the obscuration problem, and more importantly, provide us with uniform samples of X-ray binaries in a variety of different environments. It was, however, difficult to clearly resolve the point sources from the diffuse emission due to hot gas in these distant galaxies with the limited spatial resolution of X-ray observations prior to Chandra, and study of point sources was only possible for the nearest galaxies (see Fabbiano 1989 for a review).

With the unprecedented sub-arcsecond spatial resolution of Chandra, it is now possible to separate even very closely spaced point sources and easily distinguish them from surrounding diffuse emission, and reach much lower sensitivity limits than was previously possible. Much work has been done to study the X-ray source populations in distant galaxies since the launch of Chandra (see Fabianno & White 2006 for a review). For example, the point source populations have been examined in great detail and depth for starburst galaxies (e.g., the Antennae, Fabbiano et al. 2001), spiral galaxies (e.g., M101, Kuntz 2003; M81, Pooley et al. 2004) and early-type galaxies (e.g., NGC4697, Sarazin et al. 2001). Kilgard et al. (2002) studied 3 starburst and 5 spiral galaxies, and found that starburst galaxies have flatter X-ray point source luminosity function (XLF) slopes than do normal spirals, as confirmed by a later study of 11 nearby face-on spiral galaxies (Kilgard et al. 2005). Grimm et al. (2003) studied the X-ray sources (mainly high-mass X-ray binaries) in a dozen of late-type and starburst galaxies, and found that the total X-ray luminosity and the XLF are scaled

by the star formation rate. New classes of X-ray sources not previously seen in the Milky Way have emerged from studies of distant galaxies, such as the ultraluminous X-ray sources (Miller & Colbert 2004) and ultraluminous supersoft sources (Liu & di Stefano 2008) that are possibly the long sought intermediate mass black holes of a few thousand solar masses.

Chandra Data Archive is a valuable resource for various studies on different topics of X-ray astronomy. The Serendipitous Extragalactic X-ray Source Identification project (SEXSI; Harrison et al. 2003) has used archival data from 27 Chandra fields covering more than 2 deg^2 to study sources at intermediate fluxes and provided an essential complement to the Chandra Deep fields in studying the extragalactic hard X-ray sky. The Chandra Multiwavelength project (ChaMP; Kim et al. 2004) has analyzed 149 archival observations covering 10 deg^2 (Kim et al. 2007) in order to investigate the formation and evolution of high-redshift AGNs, properties of X-ray luminous galaxies and clusters, and constituents of cosmic X-ray background. The Chandra Multiwavelength Plane (ChaMPlane) survey utilizes the growing body of Chandra archival observations and the NOAO 4 m Mosaic imaging survey to measure or constrain the populations of low-luminosity accreting white dwarfs, neutron stars, and stellar mass black holes in the Galactic plane and bulge (Grindlay et al. 2005). Colbert et al. (2004) studied 1441 X-ray sources in 32 nearby spiral and elliptical galaxies and confirmed the correlation between the total point source X-ray luminosity and both the old and young stellar populations. Swartz et al. (2004) studied 154 ULXs in 82 nearby galaxies and confirmed the preponderance of ULXs in star-forming galaxies as well as their similarities to less-luminous sources, suggesting that ULXs originate in a young but short-lived population.

Here we utilize the wealth of Chandra archival data from eight years' accumulation to study the X-ray point source populations in nearby galaxies. While Chandra studies of individual galaxies have led to many interesting results, these results need to be tested with large samples of galaxies, and this study will enable such tests with good statistics. As the first in a series, we present in this paper the uniform procedures for source detection and a catalog of extragalactic sources that can be used by other researchers. In section 2, we describe our selection of ACIS observations and nearby galaxies that has resulted in 626 ACIS observations covering 383 galaxies within 40 Mpc with isophotal major axis above 1 arcminute. In section 3, we describe the uniform procedures applied to all ACIS observations to detect and visually check point sources, to compute the source counts and colors, to check the source variability, to compute the source spectrum and flux, and to assess the source position uncertainties. In section 4, we describe how we cross identify sources in multiple observations and compute upper limits for sources observed but not detected. In section 5, we present the catalog for 11824 point sources in 380 nearby galaxies and the catalog for their individual observations. We present the contamination analysis for this survey in section 6,

and present 80 ultraluminous supersoft sources and 479 ultraluminous X-ray sources within 188 host galaxies in section 7. We summarize our results and conclude with future works in section 8.

2. SELECTION OF ACIS OBSERVATIONS AND NEARBY GALAXIES

The nearby galaxy sample is extracted from the Third Reference Catalog of Galaxies (RC3; de Vacouleous 1991), which is complete for nearby galaxies having apparent diameters larger than 1 arcminute at the D_{25} isophotal level, total B-band magnitudes B_T brighter than 15.5, and redshifts not in excess of 15,000 km/sec. The positions and the D_{25} isophotes of the galaxies are taken from RC3. These positions are usually better to $5''$, as verified by comparing the surveyed galaxies to the DSS images.

Distances to galaxies are collected from the literature, including the HST Key Project (designated as KP; Freedman et al. 2002), the surface brightness fluctuation method (SBF; Tonry et al. 2001), the nearby galaxy flow model by Tully (1992; T92), and the Nearby Galaxy Catalog (T88; Tully 1988). Distances are also computed using the Hubble relation $v = H_0 D$ with $H_0 = 75$ km/s/Mpc. The NED service provides the recessional velocity v for most galaxies, and distances computed from them are designated as NED. Another source of v is RC3, and the distances computed are designated as V3K, since we use the velocities corrected to the rest frame defined by the 3K cosmic microwave background. When multiple distance measurements are available we use the best distance measurement, which is KP, followed by SBF, T92, T88, NED, and V3K.

The flux densities of galaxies at 60μm are taken from the IRAS point source catalog (IPAC, 1986), with some nearby galaxies from Rice et al. (1988). When the galaxy is below detection, the 3σ upper limit is calculated by adopting noise levels of 8.5 mJy/arcmin^2 for 60 μm (Rice et al. 1988). Here we adopt such emission as an indicator for star formation rate (i.e., SFR($M_\odot yr^{-1}$) $= 4.5 \times 10^{-44} L(60\mu m)$; Rosa-Gonzalez et al. 2002), because such fluxes are available for most of the survey galaxies. we note, however, IRAS does not have the resolution to excise the AGN, which can contribute enormous FIR emission and lead to erroneous SFR estimates.

For studying extragalactic point sources, we choose galaxies with isophotal diameters in excess of 1 arcminute and within 40 Mpc. We exclude M31, LMC and SMC that are too large as compared to Chandra fields of view; we also exclude M87 and close neighbors for its intricate jet and diffuse emission (Forman et al. 2007). These selection criteria lead to a RC3 galaxy sample of 4484 galaxies. The list of ACIS archive observations is extracted from the

Chandra Data Archive[1] on December 14, 2007, which includes 3004 ACIS-S observations and 1885 ACIS-I observations. Cross correlation of the ACIS observation list and the RC3 nearby galaxy sample, with a radius of $5'$ for ACIS-S observations and $9'$ for ACIS-I observations, leads to an ACIS sample of 383 galaxies observed by 626 observations. In addition, 14 galaxies within 40 Mpc but with isophotal diameters < 1 arcminute are observed by these selected observations.

The survey galaxies, taking up 8.5% of the 4484 RC3 galaxies within 40 Mpc, are listed in Table 1, with galactic positions, sizes, the Galactic HI column densities, the distances, the galaxy types, the B-band, the IRAS 60μm and FIR luminosities. The ACIS survey galaxy sample is compared to the RC3 galaxy sample to reveal possible preferences in the survey. Similar to the ROSAT HRI survey (Liu & Bregman 2005), the blue luminosity distribution of the survey galaxies resembles that of the RC3 galaxy sample to a large extent, as shown in Figure 1, except for a slight over-sampling of very bright galaxies. This over-sampling is related to the fact that the galaxies surveyed by the Chandra ACIS tend to be larger and closer ones, as demonstrated in Figure 2 and Figure 3. The comparison between the morphological type distributions of the two galaxy samples (Figure 4) shows an over-abundance of lenticulars and ellipticals, and over-abundances of S0/a–Sb early spirals and peculiars to a lesser extent. In contrast, there is an under-abundance of dwarf spirals and irregulars in the survey sample.

The 626 ACIS observations selected for this survey include 83 ACIS-I observations and 543 ACIS-S observations. For each observation, we use the on-axis chips, which include the S2 and S3 chips when the aimpoint is on S3, and all four I chips when the aimpoint is on an I chip. The exposure times for the selected observations range from 500 seconds to 120 kilo-seconds, with an average of 16 ksec and a total of 16,292 ksec. Among these observations, more than half ($\geq$60%) are designed to study supernovae, jet, interstellar medium, superwinds, accretion flows, dark matter halos, QSOs, AGNs, or galaxy group/clusters, and this survey is the first effort to analyze the X-ray point source populations of those galaxies.

We have placed the 626 ACIS observations into 320 groups based on the proximity of the pointings. The observations in the same group have overlapping fields of view, and are suitable to be studied together. There are 48 groups with two ACIS observations, and 45 groups with three and more observations. The latter includes the M33 group observed 28 times over six years, the M101 group observed 26 times over five years, and the PGC3598 group observed 21 times over 8 months. These multiple observations of the same sky region provide us the chance to study the long term variability of the point sources. We list in

[1]http://cxc.harvard.edu/cda/

Table 2 for each group the observed galaxies within 40 Mpc, the number of observations in the group, the total exposure time, and the individual observations. For each observation, we list the observation ID, observation date, the modified Julian Date, the exposure time, the chips used for analysis, and the total number of point sources detected and verified by visual inspection on these chips with uniform procedures as described in §3.

3. ANALYSIS OF ACIS OBSERVATIONS

For each ACIS observation, we apply the same procedures to detect and visually check point sources, to compute the source counts and colors, to check the source variability, to compute the source spectrum and flux, and to assess the source position uncertainties. The ACIS observations were downloaded from the Chandra Data Archive on December 14, 2007, and analyzed using CIAO 3.4.

3.1. Source detection and visual examination

For point source detection, we choose `wavdetect` that adopts a wavelet algorithm and is largely used for Chandra observations (Freeman et al. 2003). This tool is able to separate closely spaced point sources, and able to recognize diffuse emission quite well for its advanced treatment of the background. We run `wavdetect` on each on-axis chip with scales of $1''$, $2''$, $4''$, and $8''$ in the 0.3-8 keV band. The chance detection threshold is set to 10^{-6}, equivalent to 1 spurious detection per chip.

The sources reported by `wavdetect` are visually examined for possible false detections. Spurious point sources could emerge on the CCD edges, from streaks, or from the Lissajous patterns on S2 due to the combination of telescope wobble and a bright source falling in a bad pixel. Such sources, and sources with zero sizes, are removed from the source lists after visually examining the detected sources overlayed on the X-ray images. Despite the capacity of `wavdetect` to recognize diffuse emission, spurious point sources may arise from diffuse emission with very complex morphologies, e.g., those from the X-ray jets (such as in NGC5128) and starburst regions. Such sources are also identified and removed with visual examination. Occasionally, `wavdetect` may split a point source at large off-axis angles with distorted PSF shapes into two sources. We identify such pairs of split sources and merge them as single sources. In the end, we have detected and verified 28099 point sources from the 1355 chips of the 626 observations in this survey. We note the crucial role of visual inspection in this work, which has removed about 10% of the total number of sources originally reported

by wavdetect.

3.2. Source counts

The photon counts of sources are derived with two methods. `wavdetect` computes the source counts for detected sources by fitting a 2-D Gaussian to the image. Alternatively, we perform aperture photometry to directly count the photons within the source region with expected background counts subtracted. In this work, the source region is taken as the 3σ elliptical source region as computed by `wavdetect`, which contains 95% of the source count for an assumed 2-D Gaussian distribution. For the background region, we use an elliptical annulus around the source region with the outer/inner radius as 4/2 times the radius of the source ellipse. The background regions are checked to exclude any other source ellipses within them. The source count is computed as $C_s - C_b \times A_s/A_b$, and the error is computed as $1+\sqrt{0.75 + C_s + C_b \times (A_s/A_b)^2}$, with C_s as the raw source count, A_s as the source region area, C_b as the background count, and A_b as the background region area.

The source counts obtained from the two methods are compared for all sources detected in these ACIS observations as shown in Figure 5. For sources with detection significance $\sigma > 20$, the source counts from aperture photometry are consistent with 95% of the wavdetect photon counts, with 1-σ dispersions of 2%-8%. At lower detection significance, the source counts from aperture photometry can deviate from the wavdetect counts by up to 50%, but the average counts deviate by no more than 5% unless for those marginal detections with $\sigma < 3$. The wavdetect counts are used to compute the fluxes and luminosities in the 0.3-8 keV band.

3.3. Source colors

The photon counts are computed for different energy bands to compute X-ray colors for the sources. The combination of the X-ray colors may distinguish between AGNs, supernovae, stars, LMXBs and HMXBs because they occupy different locations in the color-color diagram (e.g., Prestwich et al. 2003). We compute the photon counts with aperture photometry for three bands following Prestwich et al. (2003), i.e., the soft band (S:0.3-1.0 keV), the medium band (M:1.0-2.0 keV) and the hard band (H:2.0-8.0 keV). The X-ray colors are computed as $C_{MS} = (M - S)/(H + M + S)$ and $C_{HM} = (H - M)/(H + M + S)$. Note that the band counts can be slightly less than 0 due to over-subtraction of the background. Figure 6 shows all detected sources above 10 counts from this survey in the color-color dia-

gram. About 2% falls into the SNR region, 11% falls into the HMXB region, 42% falls into the LMXB region, and 43% falls into the region for absorbed sources that are probably a mixture of types. We caution that these regions, based on a few hundred sources in five nearby galaxies (Prestwich et al. 2003), may not correctly categorize the X-ray sources. For example, some sources in the SNR region show clear variability within one observation and/or between different observations, thus are certainly not SNRs.

Very soft X-ray sources, including supersoft sources (SSS) and quasi-soft sources (QSS), are very common in external galaxies (Di Stefano & Kong 2004). While some soft sources are possibly white dwarfs with steady nuclear burning on their surface, some can be stripped stars, stellar black holes, or even intermediate-mass black holes of a few $\times 10^3 M_\odot$ (e.g., M81-ULS1, Liu & Di Stefano 2008). In this work, we compute the photon counts in three energy bands (0.1-1.1 keV, 1.1-2 keV, and 2-7 keV), and follow the hierarchical classification scheme (Di Stefano & Kong 2003) to check whether a source is SSS, QSS, hard, or too dim (i.e., less than 10 counts). About 24% of all 28099 detected sources are too dim, among the rest about 2.6% are classified as SSS, 10.3% as QSS, and 87.1% as hard. On the X-ray color-color diagram as in Figure 6, QSS sources are located along H=0, and SSS sources are clustered around $C_{MS} = -1, C_{HM} = 0$.

3.4. Source Variability

The Chandra observations are usually consecutive with occasional gaps of a few seconds, ideal for testing short timescale variability of the sources. The event list of a source is extracted from the 3σ elliptical source region. The nonparametric Kolmogorov-Smirnov test is applied to the event list to test the null hypothesis that the source is constant during the observation. A source can be viewed as constant if the null hypothesis probability P_{KS} is of the order of 1. A source can be viewed as variable if the probability is much smaller, for example, $\leq$0.1. To be conservative, we define a source as variable if $P_{KS} < 0.01$, i.e., the source is variable with a significance of >99%. By this criterion, about 4% (922/23957) of the detected sources above 10 counts are variable within one observation.

The binned light curve is constructed for a source to visualize its variability within an observation. An example is shown in Figure 7, which exhibits a possible X-ray eclipse. A closer look at this source is thus solicited and, with 25 ACIS observations, has led to the discovery of an X-ray eclipsing binary in M101 with an orbital period of 32.688 ± 0.002 hr, among the first of such outside the Local Group (Liu et al. 2006). We calculate the reduced $\chi^2 = \sum_{i=1}^{N}(C_i - \bar{C})^2/[(N-1)\bar{C}^2]$, with the light curve binned to N bins so that the average count per bin $\bar{C}$ is no less than 10. The reduced $\sqrt{\chi^2}$ can serve as a measure of the variation

amplitude (Collura et al. 1987). For about 10,000 sources above 40 counts, the reduced $\sqrt{\chi^2}$ ranges from 0.04 (steady) to 10 (extremely variable). The average for these sources is 0.32, and is 0.61 for sources variable by the K-S criterion.

3.5. Source spectrum and flux

For a bright point source, we extracted the spectrum from the 3σ elliptical source region with `psextract`. This tool automatically accounts for the spatial and time dependence of the ACIS quantum efficiency due to the buildup of contamination on the optical blocking filter. The corresponding background spectrum for a source is extracted from its local background region as specified in §3.2. An absorbed power-law model is fitted to each spectrum; we set the Galactic n_H as the minimum absorption column density. Most (95%) of the spectra can be fitted by the absorbed power-law model with the photon index between 1 and 4. As shown in Figure 8, the photon index distribution peaks at ~ 1.8, with 68.3% enclosed between 1.3 and 2.3.

The source flux is computed for each source from its count rate in the 0.3-8 keV band. While the source flux can be accurately computed from the spectrum for some bright sources, the flux must be derived from its count rate for most sources without a spectrum. The count rate is computed from the source count and the exposure time corrected by a vignetting factor, which is derived from the exposure map as the ratio between the local and the maximum map value. The conversion factor between the count rate and flux is computed in `xspec` using the response matrix of the chip center, assuming Galactic absorption and a power-law spectrum with a photon index $\Gamma = 1.7$ as conventionally adopted for Chandra sources.

Swartz et al. (2004) fitted power-law model to the ULX candidates from their Chandra survey of nearby galaxies, and found 80% of them have an average photon index of 1.74, while the remaining 20% are much steeper. If the source actually has a steeper spectrum, the true flux will be lower than calculated with $\Gamma = 1.7$ by, e.g., 25% if $\Gamma = 2.4$. If the source has a harder AGN-like spectrum with $\Gamma = 1.4$, the true flux will be higher by 20%. The flux can be seriously under estimated if the source is highly absorbed as in some AGNs. For example, the flux will be under-estimated by a factor of two if the absorption is $n_H = 4 \times 10^{21}$ instead of the Galactic-like 2×10^{20} cm^{-2}. On the other hand, if the underlying spectrum is a thermal one as in QSS/SSS, the flux will be over estimated by 68%/46%/23% for a blackbody of 350/150/70 eV with $n_H = 2 \times 10^{20}$ cm^{-2}.

3.6. Source position uncertainties

With the superb Chandra spatial resolution, the on-axis positional accuracy is expected to be accurate with an error less than $1''$. The positional accuracy becomes worse for faint sources at large off-axis angles. Simulations by Kim et al. (2004) show that the source position is accurately determined for strong sources regardless of the off-axis angle $D_{off-axis}$. For fainter sources, the positional error remains relatively small (less than $1'' - 2''$) within $D_{off-axis} < 6'$, and increases to $2'' - 3''$ and $4'' - 5''$ at $D_{off-axis} = 6' - 8'$ and $8' - 10'$, respectively (95% confidence). Kim et al. (2004) gave a set of empirical formulas to approximately estimate the positional error as a function of off-axis angle for a source of 20 counts and a source of 100 counts. Here we adopt their scheme to compute the positional errors for a given off-axis angle for 20 counts and 100 counts, and other counts by interpolations and extrapolations. As shown in Figure 9, thus computed positional errors are mostly (87%) less than $2''$, with only 1% larger than $5''$. We apply a conservative minimum of $1''$ for these sources. Note that the (absolute) positional error computed here is different from the statistical positional uncertainty reported by `wavdetect`, which is usually small and meaningful for relative astrometric correction (e.g., Liu & Bregman 2001).

In summary, the above procedures lead to the detection of 28099 point sources on 1355 on-axis chips for 626 ACIS observations. The number of detected sources for each observation is listed in Table 2. Of these sources, there are 734 (2.6%) with detection significance $\sigma < 2$, 3639 (13.0%) with detection significance $\sigma < 3$, and 13364 (47.6%) with $\sigma < 6$ as shown in Figure 10. The source distributions peak around 4.5σ, 14 counts after background subtraction, and 5×10^{-4} count/sec after vignetting correction (or equivalently 3×10^{-15} erg s^{-1} cm^{-2} for a power law spectral model with $\Gamma = 1.7$ and $n_H = 2 \times 10^{20}$ cm^{-2}). This composite survey thus covers a dynamical range of 5 orders of magnitudes in the source count (from 2 to 10^5), the count rate (from 3×10^{-5} to 3 count/sec) and the flux (from 2×10^{-16} to 2×10^{-11} erg s^{-1} cm^{-2}). Our analysis with the above procedures results in uniform data products and parameters for these sources.

4. SOURCES IN MULTIPLE OBSERVATIONS

To determine which source/detections in multiple observations belong to same sources, we cross correlate the 3σ source ellipses as described in §3.2 from different observations in the same group, and identify the correlated source/detections as the same sources. As shown in Figure 11, source/detections with overlapping source ellipses are identified as same sources. This straightforward method works quite well for most sources because they are well separated due to the superb Chandra spatial resolution. Occasionally source ellipses

from two nearby sources may overlap, as illustrated by the two sources on the left of Figure 11, but we can remove such confusions in most cases if we shrink the source ellipses to about the PSF sizes. In rare cases of extreme confusion, human judgment is used to determine the sources. Visual inspections are invoked to verify the cross identification of such confusing situations. In some observations, two close sources at large off-axis angles cannot be resolved and may be detected as a single source. In this situation, the flux of the detected source will be split into two components, and the relative fractions are based on its separations from the centers of the two sources determined from other observations.

Once the individual detections are determined for a source, the final position is derived from averaging the positions of individual detections weighted by the detection significance. The minimum positional error from the individual detections is adopted as the positional error. If a source was observed but not detected by `wavdetect` in an observation, the upper limit is computed as the background-subtracted photon counts within the PSF that encloses 95% of the energy at 1.5 keV, with the background computed from a surrounding annulus clear of detected sources. The source count is computed as $C_N = C_s - C_b \times A_s/A_b$, and the error is computed as $C_E = 1 + \sqrt{0.75 + C_s + C_b \times (A_s/A_b)^2}$, with C_s as the raw source count, A_s as the source region area, C_b as the background count, and A_b as the background region area. A minimum of 1 photon is set for C_N if it is less than unit. We define the source significance as $\sigma = C_N/C_E$, which is different from the detection significance as reported by `wavdetect` were it detected. Thus computed photon counts range from a few up to hundreds depending on the off-axis angles and the environments of the sources.

The same cross identification method is applied to the 92 groups with two or more observations, and lead to 10693 independent sources from 21800 detections. Among these sources, an average source is observed 4.3 times, and detected 2.0 times. About 8700 sources were observed twice or more, with 1000 sources observed 10 times or more. This survey thus provide us a wealth of data to study the long term variability of X-ray sources. For each source, we compute F_{max} as the maximum 0.3-8 keV flux from all detections, F_{min} as the minimum flux from all detections and upper limits, and the F_{max}/F_{min} ratio as an extreme indicator of its variability. A more complete view of the long-term variability can be obtained from its light curve, as shown in Figure 12 for an example. For 7784 sources with different F_{min} and F_{max} from this survey, there are 109 sources (1.4%) with $F_{max}/F_{min} \geq 100$, 1565 sources (20%) with $F_{max}/F_{min} \geq 10$, 2921 sources (37.5%) with $F_{max}/F_{min} \geq 5$, and 5617 sources (67%) with $F_{max}/F_{min} \geq 2$. In comparison, the variability during an observation, as revealed by the K-S criterion, is exhibited in about 4% (922/23957) of the detected sources above 10 counts, and in about 5.6% (781/13755) of all independent sources with 10 counts or more in at least one observation.

5. A CATALOG OF EXTRAGALACTIC X-RAY SOURCES

The analysis of 320 groups of 626 ACIS observations leads to 17559 independent sources from 28666 detections in this work. To check whether a source is associated with a galaxy, we compute the separation α between the galaxy center and the source and compare to the elliptical radius R_{25} of the D_{25} isophotal ellipse along the great arc connecting the galaxy center and the source. A source is considered as associated with the galaxy if $\alpha < R_{25}$, i.e., within the D_{25} isophote. This is because D_{25} isophotes are a good delimiter of the optical domain of the galaxies, though galactic features extend apparently beyond D_{25}, but within 2 $\times D_{25}$ of some galaxies. To not miss any galactic sources, a source with $R_{25} < \alpha < 2 \times R_{25}$ is tentatively associated with the galaxy. In this survey, there are 8519 sources (including 7457 with detection significance above 3σ) within D25 of 351 galaxies, 3305 sources (including 2809 with detection significance above 3σ) between D25 and 2D25 of 309 galaxies, and a total of 11824 sources with 2D25 isophotes of 380 galaxies. In addition, there are 5735 sources outside 2D25 isophotes of galaxies.

These extragalactic sources are listed in Table 3, ordered by group and position. For each source, we list the group number, the CXO name composed from its position, (absolute) positional error, galactic source name, nuclear separation in arcminutes and in R_{25}, the distance, the number of observations/detections, the maximum luminosity in 0.3-8 keV, the average flux, the F_{max}/F_{min} ratio, the (maximum) detection sigma, the (maximum) photon counts, the statistics for SSS/QSS and for variability in individual observations, and the identifications of the source. The identification indicates whether the X-ray source is an ultraluminous X-ray source (ULX) or an ultraluminous supersoft source (ULS) as described below, or identified with the galactic nucleus as detailed in a subsequent paper (Paper II), or whether it was observed/cataloged previously in other wavelengths as detailed in another paper (Paper IV). In each galaxy, we number the X-ray sources based on their maximum detection significance. The 5735 sources outside 2D25 of galaxies are also included in Table 3. For these sources, the luminosities are computed as if in a galaxy of that group; they are not the true luminosities but listed for comparison.

The individual observations for these sources were listed in Table 4 with their key parameters. These parameters include the source number in that observation (and the split fraction), Modified Julian Date of the observation, the exposure time, off-axis angle, vignetting factor, statistical position uncertainty, absolute position error, detection significance, source counts and (Gheral) errors for 0.3-8 KeV, two colors for the 0.3-1 keV, 1-2 keV and 2-8 keV band set, flux for an assumed $\Gamma = 1.7$ power law, K-S test probability for constancy, and whether the source is a SSS or QSS source. If a source is a split component of a merged source in an observation as described in §4, the split fraction will be less than unit, and

the listed count and flux should be multiplied by this fraction to get its true count and flux in this observation. If a source was not detected in an observation and its upper limit was computed as described in §4, we prefix the computed source significance with a negative sign, and list the background-subtracted photon count and error within its PSF and the corresponding flux.

6. CONTAMINATIONS OF THE CATALOG

A key issue for extragalactic X-ray point source catalogs is how many of these sources are actually foreground or background objects instead of objects truly associated with the studied galaxies. This contamination rate can be estimated with the logN-logS relation derived from fields without nearby galaxies. In this study, we adopt the logN-logS relation derived from ROSAT observations (Hasinger et al. 1998) complemented at low fluxes by the logN-logS relation derived from Chandra ACIS observations (Mushotzky et al. 2000).

Here we present the contamination estimates for the whole catalog, but leave the technical details and more thorough analysis to a subsequent paper (Paper III). For each galaxy, we compute the survey area curve $A(>S)$ with the longest observation that gives the area in which sources brighter than the limiting flux S can be detected in the observation. The limiting flux is computed from the (3σ) detection threshold as a function of off-axis angle and background rate, which we derive from a collection of about 1600 sources detected at 2.8-3.2σ in this survey. The number of contaminating sources in a flux interval can then be calculated with the differential form of the logN-logS relation. For each galaxy, we have calculated the surveyed area curve, the (cumulative) number of sources detected above 3σ, the numbers of the predicted foreground/background sources, and the number of "net" sources truly associated with the studied galaxy.

Estimates for individual galaxies are summed up to estimate the contamination rate for the whole catalog. The surveyed area curves for such a total survey are plotted in Figure 13. The D25 isophotes of these 439 surveyed galaxies cover about 2.1 deg^2 of the sky, while the 2×D25 isophotes cover about 4.8 deg^2 of the sky. In Figure 14 we plot the cumulative numbers of detected sources, predicted contaminating sources and the "net" sources. For all detected sources within the D25 isophotes, about 69.1% are "net" sources truly associated with the studied galaxies, and 30.9% are foreground/background objects. At larger luminosities, the net source fraction increases to 77.8% for detected sources above 10^{37} erg s^{-1}, to 85.4% for detected sources above 10^{38} erg s^{-1}, and to 87.9% for detected sources above 10^{39} erg s^{-1}. For all detected sources between D25 and 2D25 isophotes, the total "net" source fraction is about 21%, while the "net" source fraction increases to 25% for sources

above 10^{37} erg s^{-1}, to 35% for sources above 10^{38} erg s^{-1}, and to 39% for sources above 10^{39} erg s^{-1}. Considering sources within 2D25 isophotes, the total "net" source fraction is about 56% for all 11824 sources, and increases to 63%, 71%, and 74% for sources above 10^{37}, 10^{38}, and 10^{39} erg s^{-1}.

In some sense, the nuclear X-ray sources, presumably powered by Bondi accretion onto supermassive black holes in the galactic centers, are contaminations for our study of the ordinary X-ray binary populations. These nuclear X-ray sources are identified by comparing X-ray images with optical images, and the details are reported in a subsequent paper (paper II). To summarize, 234 out of 390 galactic nuclei observed in this survey are identified to X-ray sources with luminosities ranging from 2×10^{36} to 2×10^{42} erg s^{-1}. Figure 14 shows the luminosity function for these nuclear sources, which is much flatter and extends to much higher energies as compared to the luminosity function for extranuclear sources in these galaxies. For all detected sources within D25 isophotes, the nuclear sources take a fraction of 4.9%. This fraction increases to 6.6% for X-ray sources above 10^{38} erg s^{-1}, to 24% for X-ray sources above 10^{39} erg s^{-1}, and to 67% for X-ray sources above 10^{40} erg s^{-1}. At X-ray luminosities of 10^{41} erg s^{-1} and above, all detected sources are nuclear sources in a total survey as shown in Figure 13.

7. ULTRALUMINOUS X-RAY SOURCES

This survey provides a valuable opportunity to study the statistics for different X-ray source populations, including ultraluminous X-ray sources that are possibly the long sought intermediate mass black holes of a few thousand solar masses (Miller & Colbert 2004). Here ultraluminous X-ray sources are defined as those nonnuclear sources with maximum L_X(0.3-8keV) above 2×10^{39} erg s^{-1}. These sources are further classified as '1ULX' if they are within the D25 isophotes of the host galaxies, and as '2ULX' if they are outside the D25 isophotes but within 2D25 isophotes of the host galaxies. In addition, extreme ULXs with maximum L_X(0.3-8keV) above 10^{40} erg s^{-1} are designated as 'EULX'. These definitions lead to 300 1ULXs (including 47 1EULXs), 179 2ULXs (including 27 2EULXs) and a total of 479 ULXs within 188 host galaxies. These ULXs are extracted from Table 3 and listed separately in Table 5 for the readers' convenience.

The contamination rates for the ULX samples can be estimated with the logN-logS relation. For a total survey as described in §6, 360 sources with L_X(0.3-8keV) above 2×10^{39} erg s^{-1} are detected within the D25 isophotes of the surveyed galaxies, including 107 galactic nuclei, about 40 foreground/background objects, and 320 "net" nonnuclear sources. Since 253 (360-107) of these sources would be classified as 1ULXs, the net source fraction of the

1ULX sample is about 84% (213/253). Similarly, the net source fraction is about 89% for the 1EULX sample, about 40% for the 2ULX sample, and about 41% for the 2EULX sample. Applying the above net source fractions to the ULX samples, we expect 252 true 1ULXs (including 42 true 1EULXs), 72 true 2ULXs (including 11 true 2EULXs), and a total of 324 true ULXs.

One special subclass of ULXs are the ultraluminous supersoft sources (ULSs). Unlike most ULXs with a usually dominant hard power-law component, ULSs have a pure thermal spectrum of temperature $\ll$ 1keV, which justifies linking the emission to the accretion disk around an intermediate mass black hole (Liu & Di Stefano 2008). The pure thermal spectrum can also come from the steady nuclear burning on the surface of a white dwarf like the classical supersoft sources in the Milky Way and Magellanic Clouds (Kahabka & van den Heuvel 1997 and reference therein), but the bolometric luminosity would be lower than the Eddington luminosity for a white dwarf ($\approx 2 \times 10^{38}$ erg s^{-1}). For $\sim$12500 sources with 10 counts or more in at least one observation, about 4% exhibited as supersoft sources at least once, and 13% as quasi-soft sources at least once. Here we define ULSs as those with at least one supersoft phase in which the X-ray luminosity in 0.3-8 keV exceeds 2×10^{38} erg s^{-1}. To summarize, this survey reveals 53 ULSs within the D25 isophotes of 36 galaxies, and 27 ULSs between the D25 and 2D25 isophotes of 18 galaxies.

8. SUMMARY AND FUTURE WORKS

The Chandra data archive after eight years' accumulation is a treasure for various studies, and in this paper we exploit this valuable resource to study the X-ray point source populations in nearby galaxies. Cross correlation of the Chandra observation log with the nearby galaxy list resulted in 626 ACIS observations covering 383 galaxies with isophotal major axis in excess of 1 arcminute within 40 Mpc. Among these observations, about 60% were designed to study supernovae, jet, interstellar medium, superwinds, accretion flows, dark matter halos, QSOs, AGNs, or galaxy groups/clusters; this survey is the first effort to analyze the X-ray point source populations of those galaxies. Uniform data reduction and analysis procedures were applied to all 626 ACIS observations to detect and visually check point sources, to compute the source counts and colors, to check the source variability, to compute the source spectrum and flux, and to assess the source position uncertainties.

The uniform data analysis procedures detected 28099 point sources on 1355 on-axis chips for 626 ACIS observations. These detections include 8700 sources observed twice or more and 1000 sources observed 10 times or more, providing us a wealth of data to study the long term variability of these X-ray sources. Cross correlation of these sources with galaxy isophotes

led to 8519 sources within the D25 isophotes of 351 galaxies, 3305 sources between the D25 and 2D25 isophotes of 309 galaxies, and additionally 5735 sources outside 2D25 isophotes of galaxies. This catalog was cross correlated with X-ray point source catalogs available in the VizieR service, including 22 Chandra source catalogs, 7 XMM source catalogs and 5 ROSAT source catalogs; 4378 sources (including 3410 within 2D25 isophotes) have matches within their positional errors. In summary, this survey has produced a uniform catalog of 11824 sources within 2D25 isophotes of 380 galaxies with 71% of them reported for the first time. This is by far the largest catalog of X-ray point sources in nearby galaxies.

Some statistical properties for these extragalactic X-ray sources have been derived. Contamination analysis using the logN-logS relation shows that 74% of sources within 2D25 isophotes above 10^{39} erg s^{-1}, 71% of sources above 10^{38} erg s^{-1}, 63% of sources above 10^{37} erg s^{-1}, and 56% of all sources are truly associated with galaxies. This archival survey leads to 300 ULXs with $L_X(0.3-8\mathrm{keV}) \geq 2\times10^{39}$ erg s^{-1} within D25 isophotes, 179 ULXs between D25 and 2D25 isophotes, and a total of 479 ULXs within 188 host galaxies, with about 324 ULXs truly associated with host galaxies based on the contamination analysis. About 4% of the sources exhibited at least one supersoft phase, and 80 sources are classified as ultraluminous supersoft sources with $L_X(0.3-8\mathrm{keV}) \geq 2\times10^{38}$ erg s^{-1}. Most X-ray sources are variable between observations separated by days to years, and the extreme variability indicator $F_{max}/F_{min} \geq 2$ for 67% of the sources with two or more observations.

This archival survey enables studies of many aspects of the X-ray source populations in nearby galaxies, and a number of future works are planned to better utilize this uniform dataset and its good statistics. Firstly, to study the ordinary X-ray binary populations, we need to excise from this catalog the nuclear X-ray sources that are presumably powered by Bondi accretion of interstellar medium onto the supermassive black holes in the galactic centers. The nuclear X-ray sources observed in this survey are identified by comparing X-ray images with optical images, and the details will be reported in a subsequent paper (paper II). Secondly, while previous studies agree in the general picture that the X-ray luminosity functions (XLFs) are flatter for starbursting galaxies than for spiral or early-type galaxies, disagreements exist for some important details such as the flattening of XLF at luminosities around a few $\times10^{37}$ erg s^{-1} and the break of XLF around 10^{39} erg s^{-1}. In a subsequent paper (Paper III), we utilize this survey to construct a library of XLFs for 380 galaxies of different types with uniform procedures, and test the XLF evolution and details with good statistics. Thirdly, to understand the nature of these X-ray sources, we need to identify and study them in other wavelengths in addition to their X-ray spectral and timing properties. In another subsequent paper (Paper IV), we study the X-ray source identification and classification in the optical, infrared, and radio bands with 120 catalogs available in the VizieR service, and present the X-ray properties for different classes derived from multiwavelength studies.

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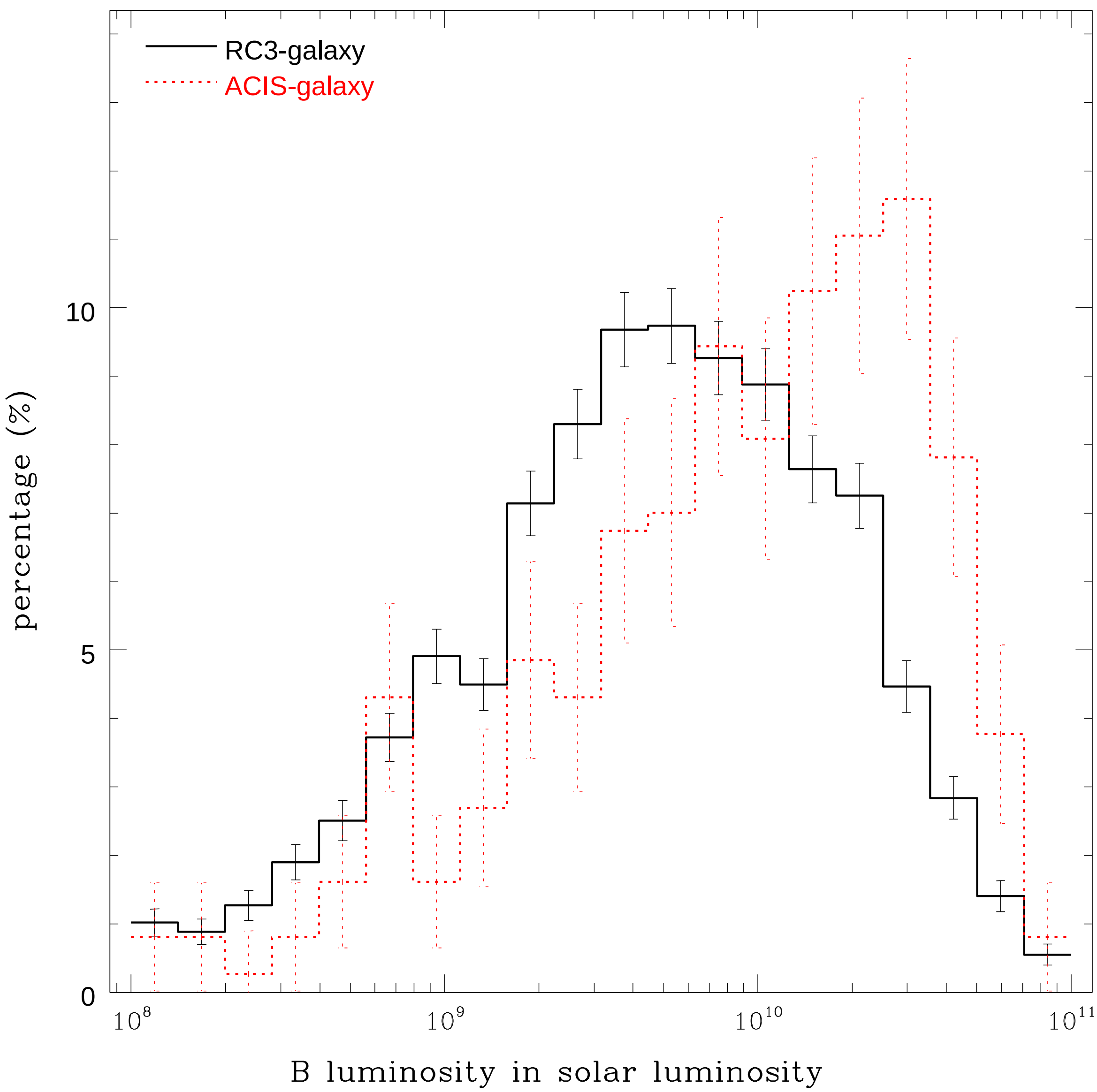

Fig. 1.— The distribution of blue luminosities for the Chandra ACIS survey galaxy sample in comparison with the RC3 galaxy sample. More bright galaxies, presumably larger in size and closer in distance, were surveyed by Chandra/ACIS than faint galaxies.

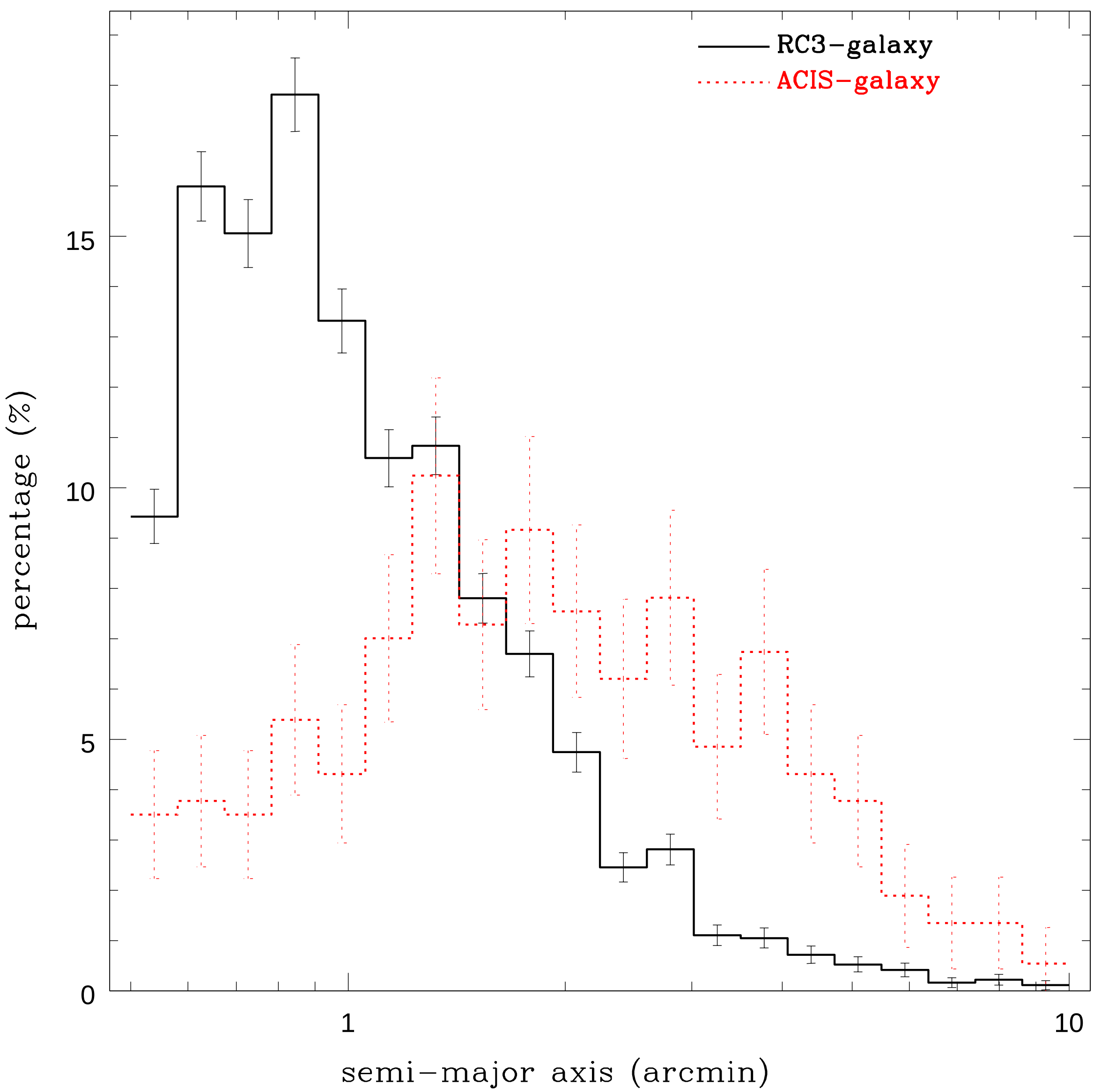

Fig. 2.— Galaxy size distribution of the Chandra ACIS survey galaxy sample in comparison with the RC3 galaxy sample. Slightly more large galaxies were surveyed by Chandra/ACIS than small galaxies.

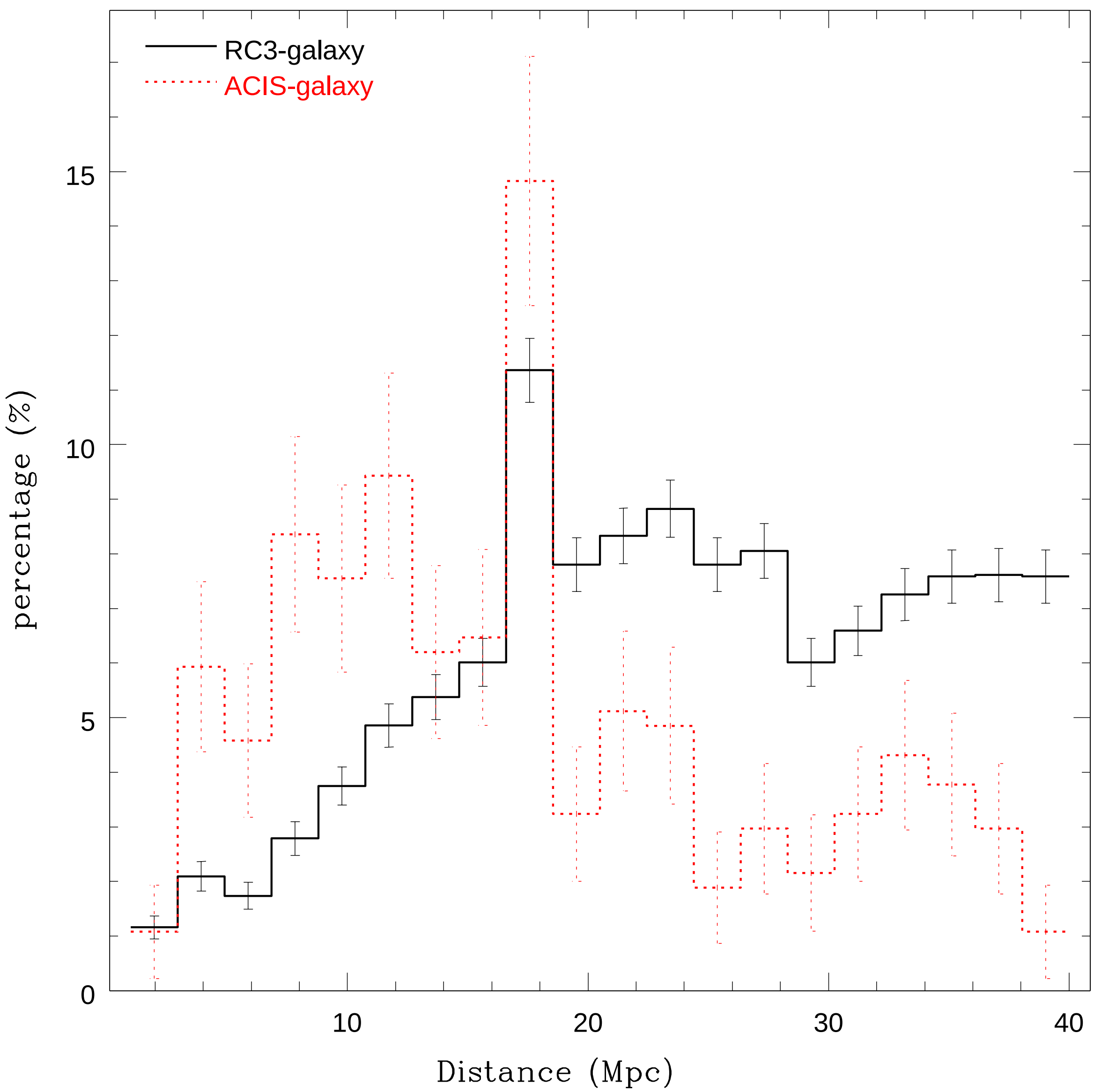

Fig. 3.— Galaxy distance distribution of the Chandra ACIS survey galaxy sample in comparison with the RC3 galaxy sample. More nearby galaxies (< 15Mpc) were surveyed than those distant galaxies (> 15 Mpc).

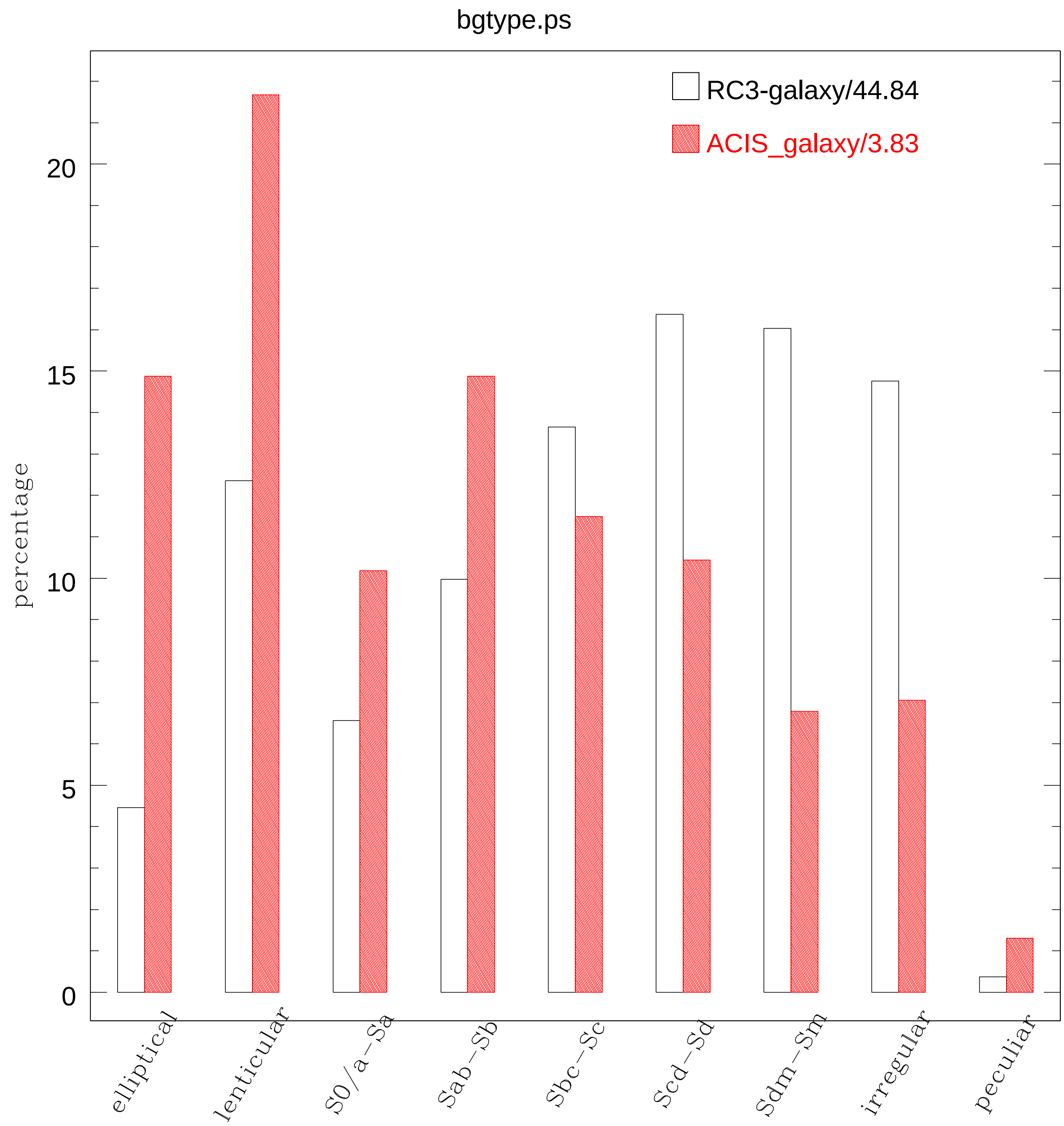

Fig. 4.— The distribution of morphological types of the Chandra ACIS survey galaxy sample in comparison with the RC3 galaxy sample. Relatively more early-types galaxies and Sa–Sb spiral galaxies were surveyed than other types, since they were the ones observed most.

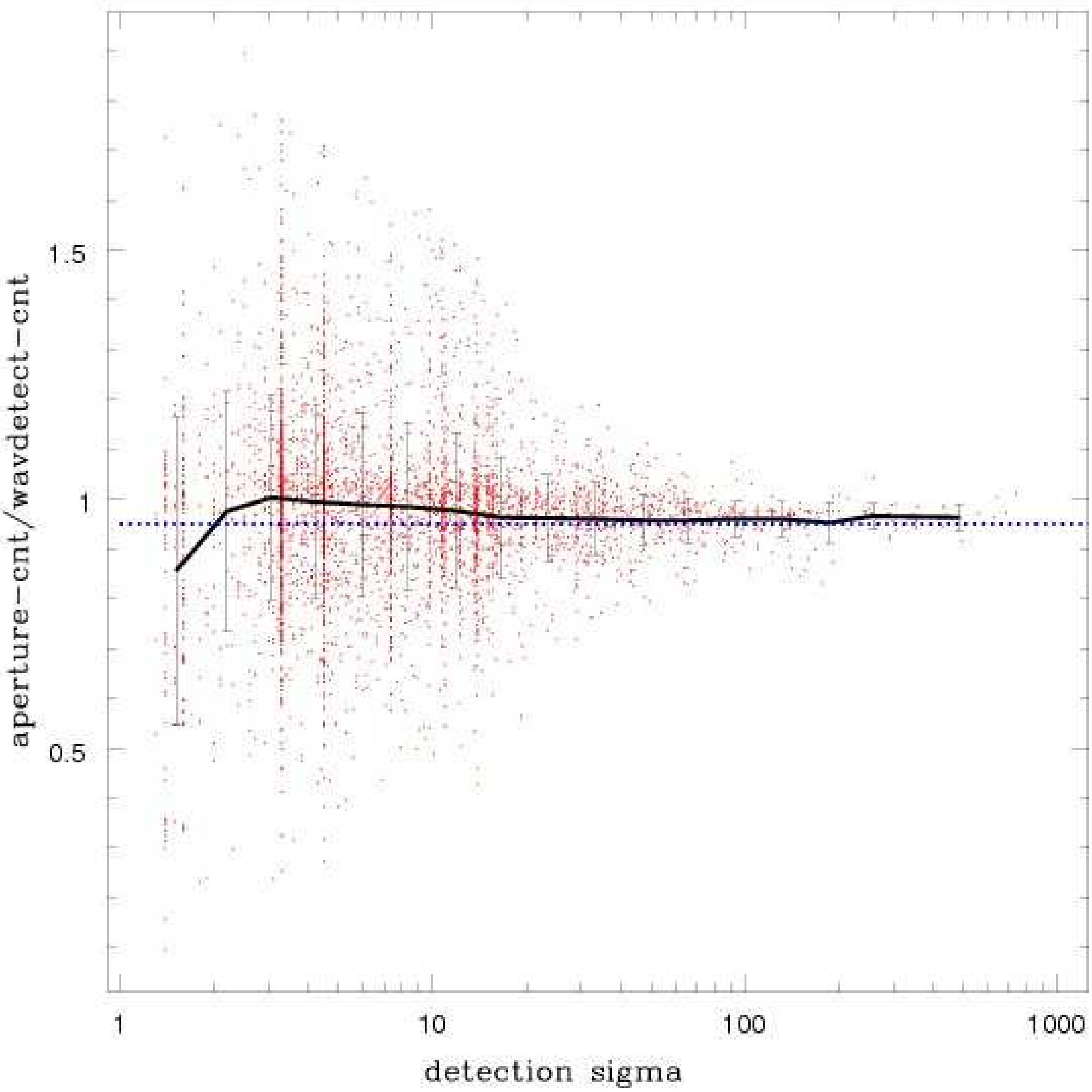

Fig. 5.— Comparison of the photon counts from `wavdetect` and from aperture photometry that uses a source ellipse enclosing 95% of the total counts. The ratio is calculated for 31,400 sources detected in the ACIS survey. The blue dotted line indicates a ratio of 95%. The black solid line and the error bars indicate the average ratio and dispersion for detection sigma intervals.

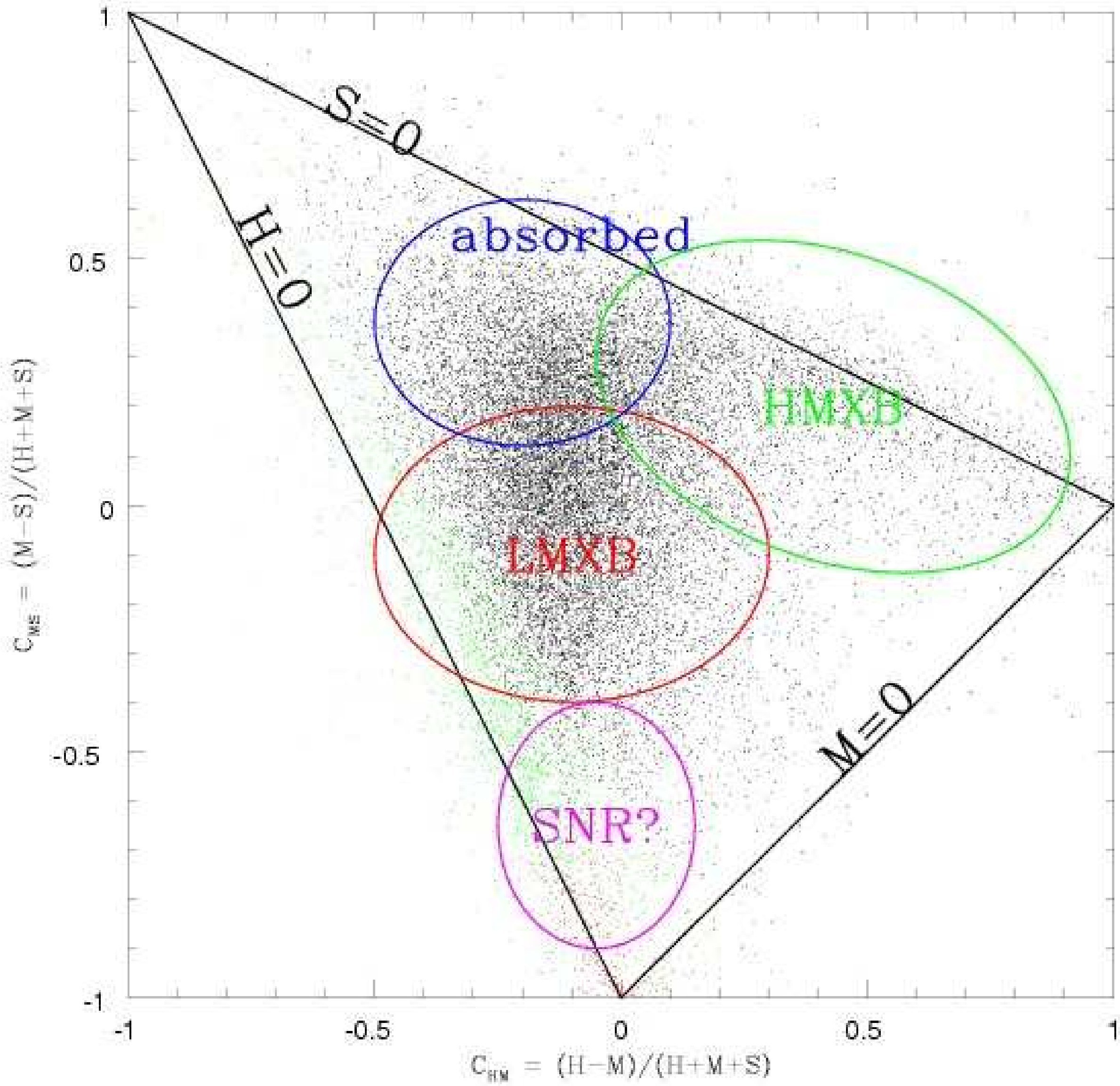

Fig. 6.— The X-ray color-color diagram for sources above 10 counts. Most of the sources fall within the triangle whose sides stand for zero counts in the soft (S:0.3-1 keV), medium (M:1-2 keV), and hard (H:2-8 keV) bands. The four regions located by SNR(?), LMXB, HMXB and absorbed sources are taken from Prestwich et al. (2003). We put a question mark after SNR because some sources are apparently not SNRs as suggested by their variabilities. The red dots clustered around $C_{MS} = -1, C_{HM} = 0$ are the supersoft sources, and the blue dots along H=0 are the quasi-soft sources.

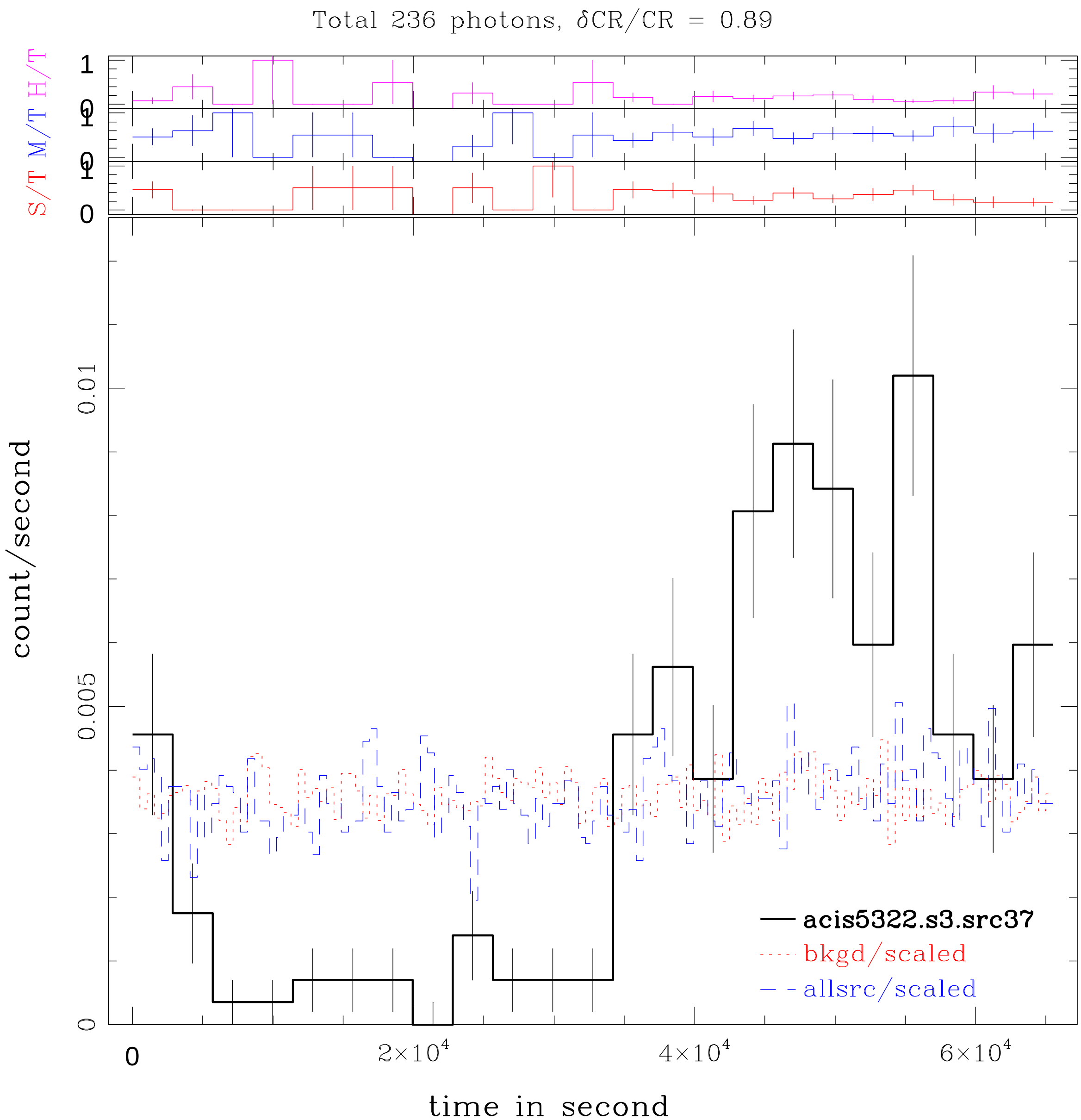

Fig. 7.— The binned light curve for an X-ray source (CXOJ140336.007+541924.74) in M101 as observed in ObsID 5322. This source (acis5322.s3.src37) exhibited an X-ray eclipse during the 65 ksec observation. The binned light curves for all detected sources and for the total background of S3 chip are overplotted for comparison, which clearly shows that the eclipse is not caused by background or flares but a behavior unique to this source itself. The three upper panels show the fractions of photon counts in soft (0.3-1 keV), medium (1-2 keV) and hard (2-8 keV) bands.

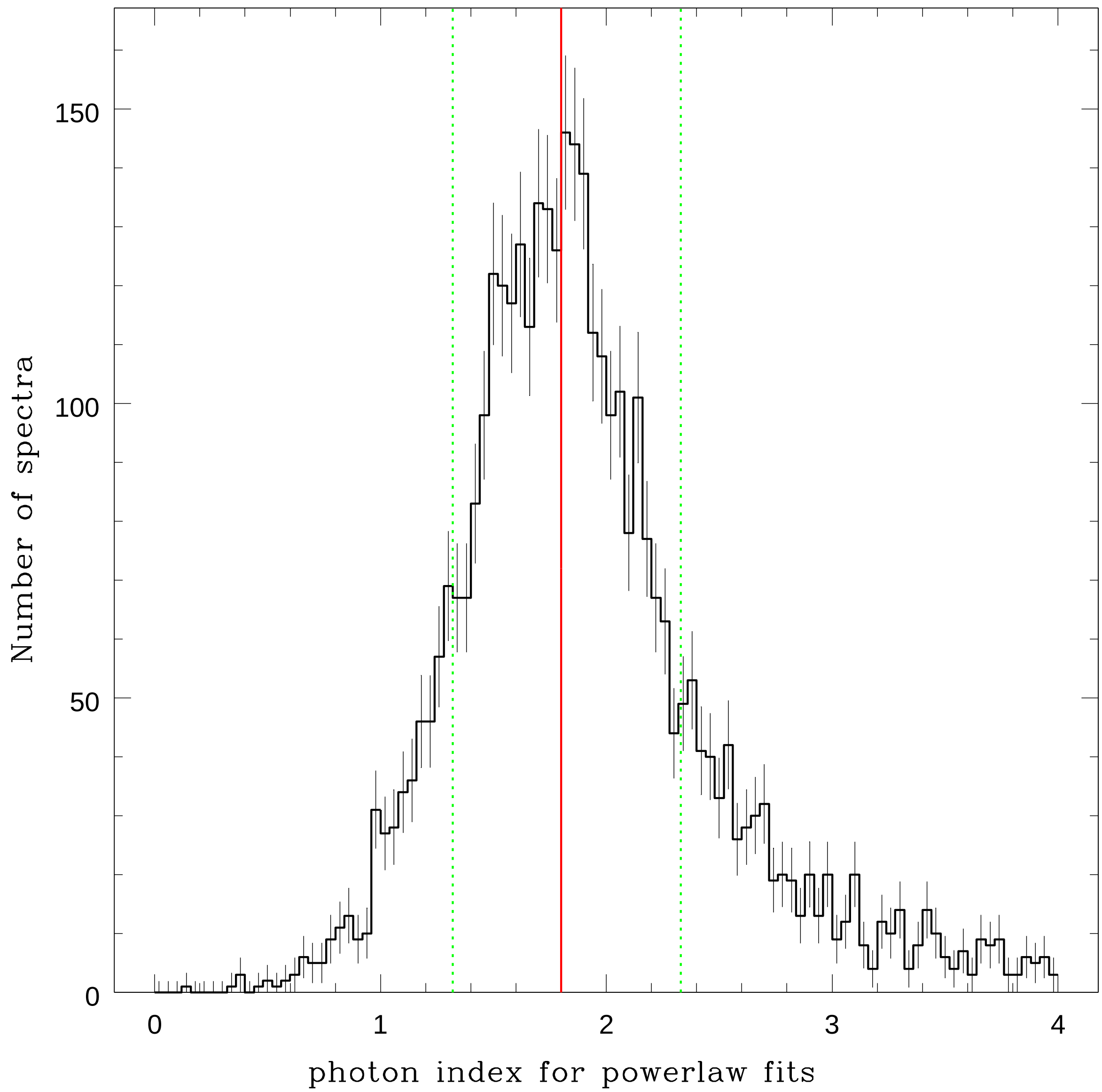

Fig. 8.— Histogram of the photon indices for acceptible power-law fits ($\chi^2_\nu < 1.5$) to ∼3900 ACIS spectra from this survey. The distribution peaks at ~ 1.8 as indicated by the vertical solid line, with 68.3% of all photon indices enclosed between 1.3 and 2.3 as indicated by the vertical dashed lines.

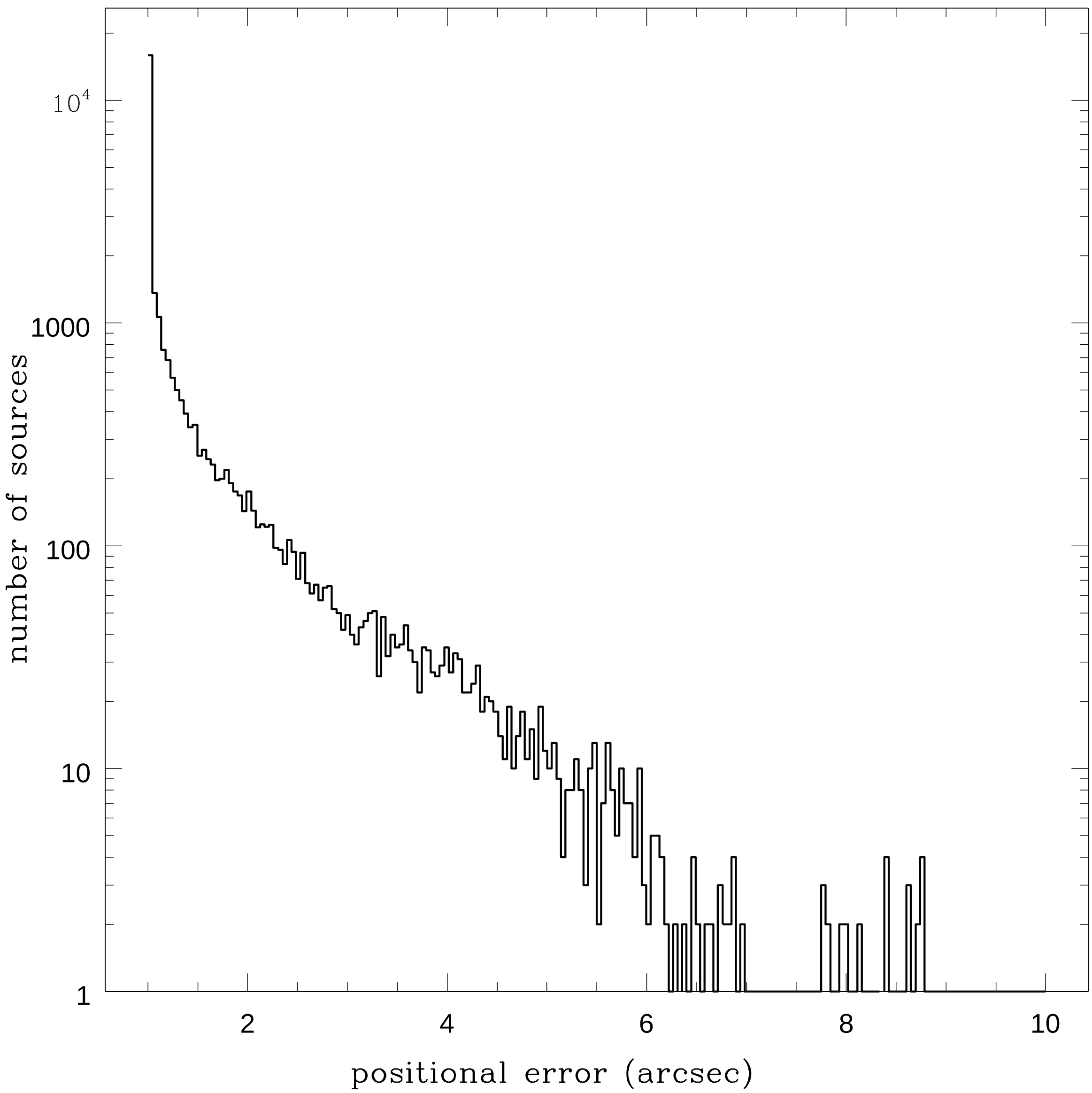

Fig. 9.— Histogram of the positional errors for the 28099 X-ray point sources detected in 626 ACIS observations analyzed in this survey. The positional errors are computed following the Kim et al. (2004a) scheme with a conservative minimum of 1″. The positional errors are less than 2″/3″/4″/5″ for 87%/95%/98%/99% of these sources.

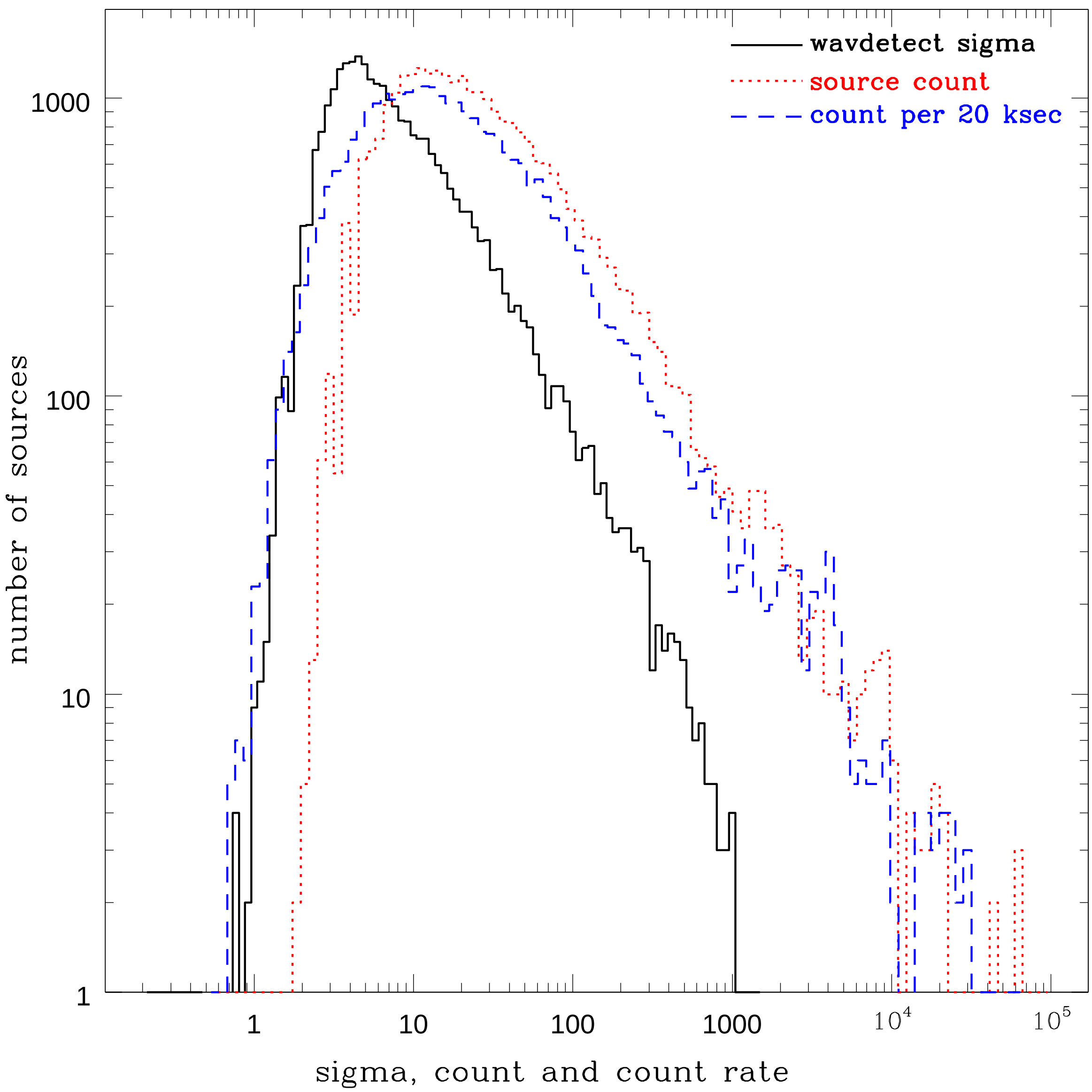

Fig. 10.— Histograms of the wavdetect sigma, source count and count rate for sources detected in this survey. Of these 28099 sources, about 2.6%/13.0%/47.6%/66.6% are detected with sigma below 2/3/6/10. This composite survey covers a dynamical range of 5 orders of magnitudes in the source count (from 2 to 10^5 after background subtraction) and in the count rate (from 3×10^{-5} to 3 count/sec after vignetting correction). The source distributions peak at $\sigma \approx 4.5$, 14 counts and 5×10^{-4} count/sec.

Fig. 11.— Cross identification of sources detected in multiple observations. The source ellipses as reported by `wavdetect` from individual observations are overlayed on the merged X-ray image with their labels. Overlapping ellipses are taken as single sources (crosses). The two close sources to the left of the image represent a confusing situation where source ellipses from two sources overlap. Such confusions can be removed by shrinking the source ellipses, and single sources are usually identified correctly as in this case.

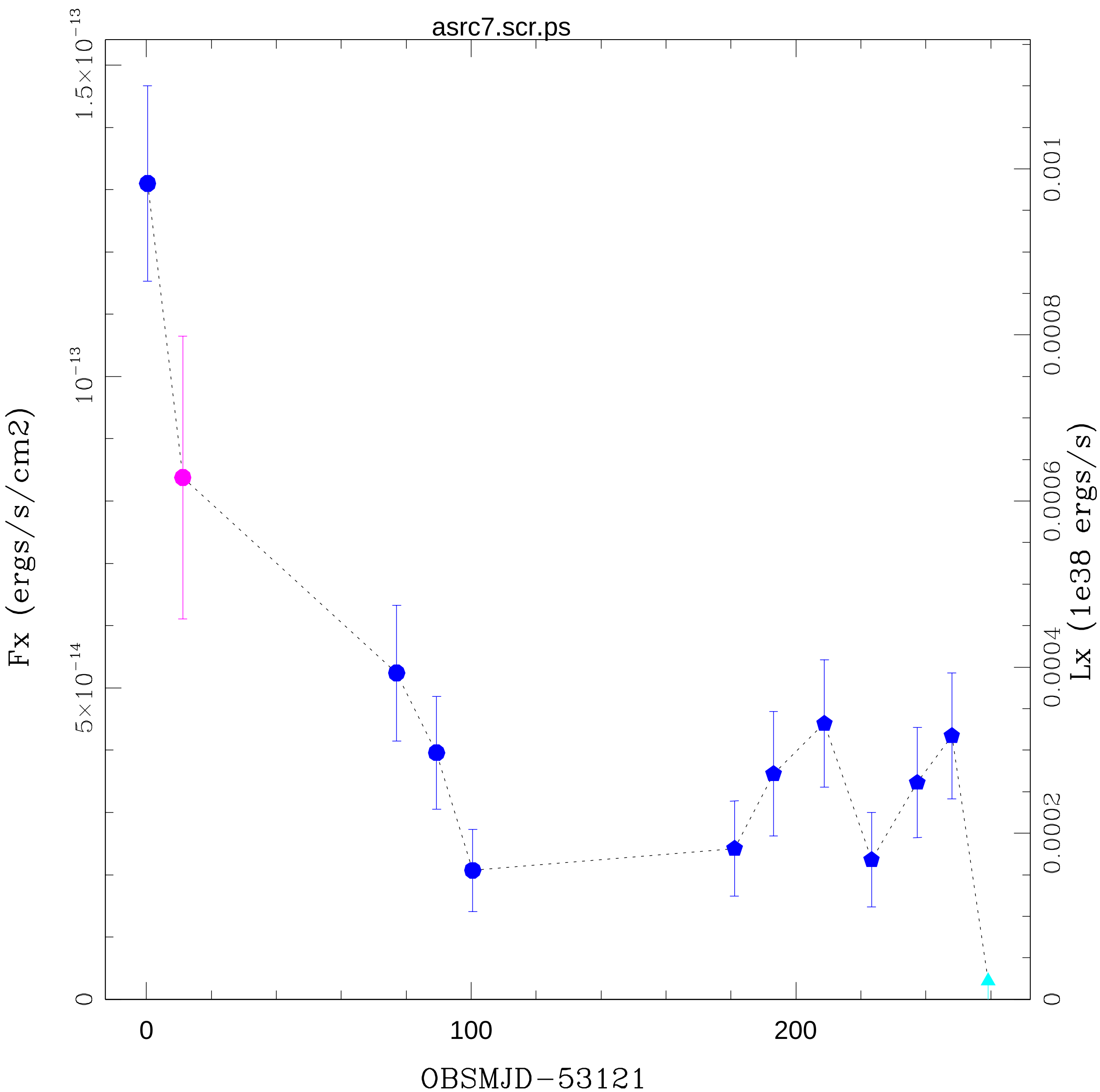

Fig. 12.— The light curve for an X-ray source (CXOJ010029.167-334735.99) in PGC3589. The fluxes and luminosities are derived from the count rates for a $\Gamma = 1.7$ powerlaw model in 0.3-8 keV band. The source was observed 12 times and detected 11 times, with one upper limit (arrow). The point shape indicates which chip the source was on: circle for S3, pentagon for S2, and square for I chips. The point color indicates the QSS/SSS classifications: red for SSS, purple for QSS, blue for hard, and black for dim sources.

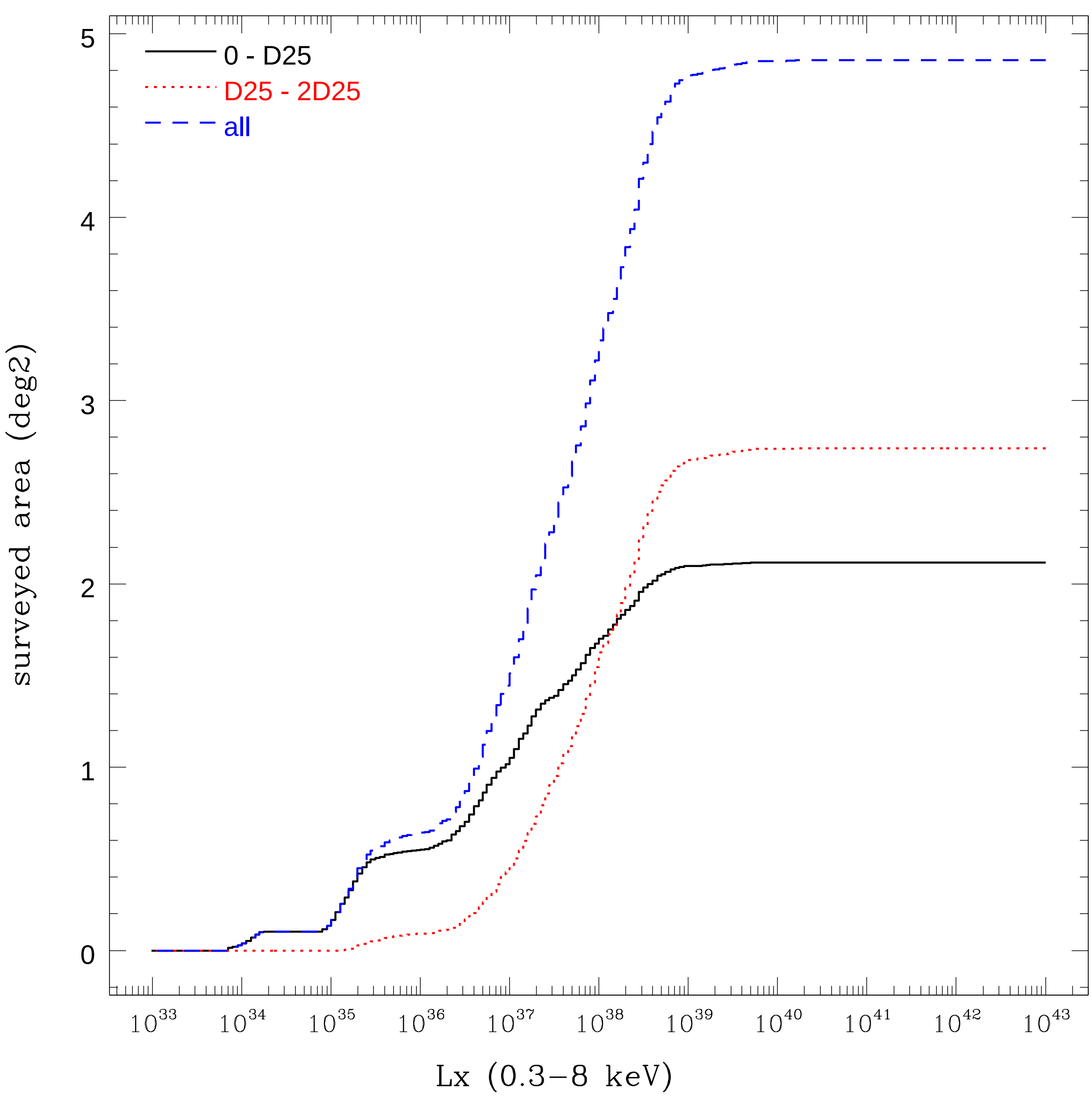

Fig. 13.— Surveyed area curves for the D25 isophotes (solid line), regions outside D25 but inside 2×D25 isophotes (dotted line), and 2×D25 isophotes of 439 galaxies observed in this ACIS survey.

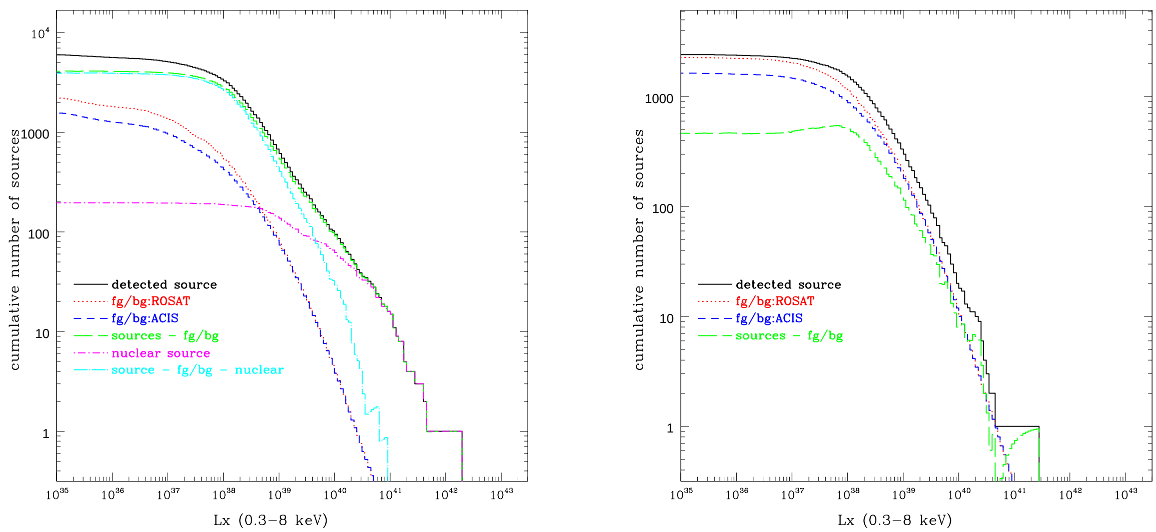

Fig. 14.— (a) The cumulative numbers of sources within the D25 isophotes of 439 surveyed galaxies. The various lines represent the detected sources (solid line), the foreground/background sources predicted with the ROSAT logN-logS relation (dotted line) and the ACIS logN-logS relation (dashed line), the "net" sources (long dashed line) as subtracting the (average of the two predictions of) foreground/background sources from the detected sources, the nuclear sources (dash-dotted line) and the "net" sources with nuclear sources subtracted (long dash-dotted line). (b) the cumulative numbers of sources outside D25 but inside 2×D25 isophotes.

Table 1. Properties of surveyed galaxies

galaxy	GLON[a] (deg)	GLAT[b] (deg)	R25[c] (′)	r25[d] (′)	nH[e] (cm^{-2})	Distance[f] (Mpc)	Morphol.[g] Type	Hubble[h] T	L_B[i] ($L_\odot$)	$f_\nu(60\mu m)$[j] (Jy)	Group No.	Notes[k]
NGC14	108.13	-45.83	1.41	1.05	4.05E+20	12.8[T88]	IB(s)m	10.0	2.4e+09	0.053	256	···
NGC45	55.89	-80.67	4.26	2.95	2.24E+20	8.1[T92]	SA(s)dm	8.0	3.8e+09	0.012	38	···
NGC55	332.67	-75.74	16.18	2.81	1.72E+20	1.48[MM]	SB(s)m	9.0	3.0e+09	0.076	56	···
IC10	118.97	-3.34	3.15	2.56	5.28E+21	0.825[MM]	IBm	10.0	5.4e+08	<0.0002	34	···
NGC253	97.36	-87.96	13.77	3.38	1.42E+20	3.0[T92]	SAB(s)c	5.0	2.0e+10	3.8	26	HII Sbrst
NGC278	123.04	-15.32	1.04	0.99	1.33E+21	11.8[T88]	SAB(rs)b	3.0	1.2e+10	1.5	54	···
PGC3589	287.53	-83.16	19.91	15.46	1.98E+20	0.079[MM]	E	···	1.3e+06	7.6e-07	3	···
IC1613	129.79	-60.56	8.11	7.23	2.97E+20	0.7047[KP]	IB(s)m	10.0	9.0e+07	0.00022	114	···
NGC404	127.03	-27.01	1.73	1.73	5.31E+20	3.27[SBF]	SA(s)0-	-3.0	7.1e+08	0.01	76	LINER
NGC474	136.80	-58.68	3.54	3.16	3.14E+20	32.5[T88]	SA(s)0o	-2.0	2.7e+10	<0.43	185	···
NGC520	138.70	-58.06	2.23	0.91	3.27E+20	27.8[T88]	peculiar	99.0	1.5e+10	11.1	113	···
NGC524	136.51	-52.45	1.38	1.38	4.85E+20	23.99[SBF]	SA(rs)0+	-1.0	3.0e+10	0.19	184	···
NGC598	133.61	-31.33	35.40	20.85	5.58E+20	0.8166[KP]	SA(s)cd	6.0	5.2e+09	0.0033	1	HII
NGC625	273.67	-73.12	2.88	0.95	2.22E+20	3.9[T88]	SB(s)m	9.0	7.7e+08	0.035	98	HII
NGC628	138.62	-45.71	5.24	4.78	4.81E+20	9.7[T88]	SA(s)c	5.0	1.8e+10	0.89	30	···
NGC660	141.62	-47.35	4.16	1.58	4.86E+20	14.0[T92]	SB(s)a	1.0	8.0e+09	6.2	88	HII LINER
IC1727	137.96	-33.90	3.46	1.55	7.21E+20	6.4[T88]	SB(s)m	9.0	1.9e+09	0.011	92	LINER2
NGC672	138.02	-33.78	3.62	1.28	7.18E+20	7.4[T92]	SB(s)cd	6.0	5.3e+09	0.076	92	HII
NGC720	173.02	-70.36	2.34	1.20	1.54E+20	27.67[SBF]	E5	-5.0	4.2e+10	<0.076	21	···
NGC821	151.55	-47.56	1.29	0.81	6.39E+20	24.10[SBF]	E6	-5.0	1.8e+10	<0.022	12	···
NGC855	144.39	-31.53	1.32	0.48	6.38E+20	9.73[SBF]	E	-5.0	1.0e+09	0.047	310	···
NGC891	140.38	-17.42	6.74	1.26	7.64E+20	8.36[SBF]	SA(s)b	3.0	1.9e+10	1.9	45	HII
NGC925	144.89	-25.18	5.24	2.95	6.32E+20	9.12[KP]	SAB(s)d	7.0	1.3e+10	0.29	279	HII
NGC949	144.05	-21.63	1.20	0.64	5.05E+20	11.27[SBF]	SA(rs)b	3.0	3.8e+09	0.21	271	···
NGC959	145.09	-23.00	1.17	0.72	5.74E+20	10.6[T92]	Sdm	8.0	2.0e+09	0.056	282	···
NGC988	181.97	-59.69	2.29	1.23	2.85E+20	18.3[T88]	SB(s)cd	5.7	2.2e+10	0.35	226	···
PGC10025	143.99	-17.74	0.57	0.57	7.78E+20	9.5[NED]	SABdm	8.0	1.5e+08	<0.0011	272	···
NGC1012	149.08	-27.19	1.26	0.55	8.96E+20	14.4[T88]	S0/a	.0	4.0e+09	0.46	237	···
NGC1003	144.00	-17.55	2.75	0.93	7.87E+20	9.9[T92]	SA(s)cd	6.0	5.8e+09	0.11	272	···
NGC1023	145.02	-19.09	4.35	1.47	7.16E+20	11.43[SBF]	SB(rs)0-	-3.0	1.9e+10	<0.03	197	···
NGC1036	155.51	-36.58	0.72	0.52	8.70E+20	11.2[T88]	peculiar	99.0	6.1e+08	0.068	262	···
NGC1023A	145.07	-19.07	0.64	0.32	7.21E+20	9.9[NED]	IB	···	3.8e+08	<0.00071	197	···
NGC1052	182.02	-57.93	1.51	1.04	3.07E+20	19.41[SBF]	E4	-5.0	1.7e+10	0.15	60	LINER Sy2
NGC1055	171.33	-51.75	3.79	1.34	3.37E+20	13.5[T92]	SBb	3.0	1.4e+10	1.9	90	LINER2

Table 1—Continued

galaxy	GLON[a] (deg)	GLAT[b] (deg)	R25[c] (′)	r25[d] (′)	nH[e] (cm^{-2})	Distance[f] (Mpc)	Morphol.[g] Type	Hubble[h] T	L_B[i] ($L_{\odot}$)	$f_{\nu}(60\mu m)$[j] (Jy)	Group No.	Notes[k]
NGC1068	172.10	-51.94	3.54	3.01	3.53E+20	14.4[T88]	SA(rs)b	3.0	5.2e+10	16.8	39	Sy1
NGC1058	146.41	-20.37	1.51	1.41	6.65E+20	9.1[T88]	SA(rs)c	5.0	3.1e+09	0.097	78	Sy2
NGC1073	170.91	-50.73	2.45	2.23	4.23E+20	15.2[T88]	SB(rs)c	5.0	1.0e+10	0.15	219	···
NGC1097	226.91	-64.68	4.67	3.16	1.85E+20	16.8[T92]	SB(s)b	3.0	4.7e+10	6.0	84	Sy1
NGC1156	156.31	-29.20	1.66	1.23	1.14E+21	6.4[T88]	IB(s)m	10.0	1.7e+09	0.096	291	···
NGC1189	199.15	-57.32	0.85	0.78	4.23E+20	34.5[NED]	SB(s)dm	8.0	3.7e+09	<0.028	147	···
NGC1199	199.18	-57.26	1.20	0.95	4.27E+20	33.11[SBF]	E3	-5.0	2.2e+10	<0.045	147	···
NGC1291	247.52	-57.05	4.89	4.07	2.12E+20	8.6[T88]	SB(s)0/a	.0	2.1e+10	0.06	53	···
NGC1313	283.36	-44.64	4.56	3.46	3.89E+20	3.7[T88]	SB(s)d	7.0	4.1e+09	0.22	15	HII
NGC1316	240.16	-56.69	6.01	4.25	1.89E+20	21.48[SBF]	SAB(s)0o	-2.0	1.2e+11	0.62	149	LINER
NGC1317	239.97	-56.69	1.38	1.20	1.91E+20	16.9[T88]	SAB(r)a	1.0	8.3e+09	0.42	149	···
PGC12827	212.16	-54.42	1.17	0.35	2.23E+20	28.3[NED]	S	···	1.8e+09	<0.012	55	···
NGC1332	212.18	-54.37	2.34	0.72	2.23E+20	22.91[SBF]	S(s)0-	-3.0	2.7e+10	0.12	55	···
NGC1365	237.95	-54.60	5.61	3.08	1.39E+20	17.38[KP]	SB(s)b	3.0	5.0e+10	10.3	14	Sy1.8
NGC1371	218.96	-53.35	2.81	1.94	1.39E+20	23.4[T92]	SAB(rs)a	1.0	2.4e+10	0.049	192	···
NGC1381	236.47	-54.04	1.35	0.37	1.31E+20	18.03[SBF]	SA0	-1.6	5.2e+09	<0.0059	50	···
NGC1386	237.66	-53.97	1.69	0.64	1.37E+20	16.52[SBF]	SB(s)0+	-.6	6.0e+09	0.66	172	Sy2
PGC13343	236.60	-53.96	0.55	0.55	1.32E+20	22.1[NED]	SA0-	-3.0	9.2e+08	<0.0053	50	···
NGC1387	236.82	-53.95	1.41	1.41	1.33E+20	20.32[SBF]	SAB(s)0-	-3.0	1.3e+10	0.41	50	···
NGC1382	236.29	-53.92	0.76	0.66	1.31E+20	22.59[SBF]	SAB(s)0-	-2.7	2.5e+09	<0.0092	50	···
NGC1389	237.23	-53.89	1.15	0.69	1.37E+20	21.68[SBF]	SAB(s)0-	-3.3	7.7e+09	<0.014	6	···
NGC1396	236.70	-53.71	0.50	0.43	1.35E+20	10.8[NED]	SAB0-	-3.0	2.2e+08	<0.00089	6	···
NGC1399	236.71	-53.64	3.46	3.23	1.34E+20	19.95[SBF]	E1	-5.0	4.1e+10	<0.16	6	···
NGC1404	236.95	-53.56	1.66	1.48	1.36E+20	20.99[SBF]	E1	-5.0	2.8e+10	<0.04	6	···
PGC13449	236.58	-53.49	0.66	0.52	1.30E+20	11.0[NED]	SAB(s)0o	-2.0	1.4e+08	<0.0015	6	···
PGC13452	237.17	-53.46	0.57	0.53	1.40E+20	12.0[NED]	E0	-5.0	8.1e+07	<0.0016	6	···
IC343	209.43	-50.35	0.81	0.39	5.56E+20	24.5[NED]	SB(rs)0+	-1.0	2.5e+09	<0.0068	118	···
NGC1427A	236.99	-53.29	1.17	0.74	1.36E+20	16.9[T88]	IB(s)m	10.0	2.2e+09	0.027	96	···
NGC1407	209.64	-50.38	2.29	2.14	5.42E+20	28.84[SBF]	E0	-5.0	6.7e+10	0.052	118	···
NGC1427	236.60	-52.85	1.82	1.23	1.24E+20	23.55[SBF]	E+	-4.1	1.6e+10	<0.045	109	···
IC342	138.17	10.58	10.69	10.45	3.02E+21	3.9[T88]	SAB(rs)cd	6.0	9.0e+10	0.57	37	HII
NGC1481	214.00	-47.81	0.51	0.34	3.73E+20	23.1[NED]	SA0-	-3.3	1.4e+09	0.086	155	···
NGC1482	214.12	-47.80	1.23	0.69	3.69E+20	19.6[T88]	SA0+	-.8	3.7e+09	5.5	155	HII
NGC1493	253.20	-48.86	1.73	1.61	1.44E+20	11.3[T88]	SB(r)cd	6.0	3.9e+09	0.13	199	···

Table 1—Continued

galaxy	GLON[a] (deg)	GLAT[b] (deg)	R25[c] (′)	r25[d] (′)	nH[e] (cm^{-2})	Distance[f] (Mpc)	Morphol.[g] Type	Hubble[h] T	L_B[i] ($L_\odot$)	$f_\nu(60\mu m)$[j] (Jy)	Group No.	Notes[k]
NGC1507	193.06	-37.56	1.82	0.43	1.03E+21	10.0[T92]	SB(s)m	9.0	2.9e+09	0.068	267	· · ·
PGC14617	231.01	-46.63	0.83	0.62	1.97E+20	18.2[NED]	SB(s)c	5.0	2.0e+09	0.03	49	· · ·
NGC1553	265.63	-43.69	2.23	1.41	1.50E+20	18.54[SBF]	SA(r)0o	-2.0	4.2e+10	0.074	145	LINER
NGC1569	143.68	11.24	1.82	0.89	2.24E+21	1.6[T88]	IBm	10.0	6.7e+08	0.052	48	Sbrst Sy1
NGC1637	199.56	-30.02	1.99	1.62	4.40E+20	8.9[T88]	SAB(rs)c	5.0	3.9e+09	0.23	13	· · ·
NGC1672	268.79	-38.99	3.30	2.74	2.28E+20	14.5[T88]	SB(s)b	3.0	2.6e+10	3.1	127	Sy2
NGC1705	261.08	-38.74	0.95	0.70	4.19E+20	6.0[T88]	SA0-	-3.0	5.2e+08	0.014	105	HII
IC396	142.65	15.52	1.04	0.72	1.06E+21	14.4[T88]	S	· · ·	4.7e+09	0.21	248	· · ·
PGC16744	234.44	-35.12	0.52	0.34	1.59E+20	9.1[NED]	SB0	· · ·	· · ·	· · ·	122	· · ·
NGC1800	234.44	-35.12	1.00	0.55	1.59E+20	7.4[T88]	IB(s)m	10.0	6.0e+08	0.019	122	HII
NGC1808	241.21	-35.90	3.23	1.95	2.71E+20	10.8[T88]	SAB(s)a	1.0	1.2e+10	4.6	125	Sy2
NGC2110	212.93	-16.55	0.85	0.63	1.83E+21	31.1[NED]	SAB0-	-3.0	· · ·	1.8	110	Sy2
NGC2146	135.66	24.90	3.01	1.69	7.30E+20	17.2[T88]	SB(s)ab	2.0	2.7e+10	17.3	18	· · ·
NGC2337	172.94	21.80	1.12	0.83	8.39E+20	8.2[T88]	IBm	10.0	1.1e+09	0.051	297	· · ·
PGC20551	241.88	-7.96	0.93	0.56	2.16E+21	24.0[V3K]	SAB(r)0o	-1.6	1.4e+10	1.1	150	· · ·
NGC2276	127.67	27.71	1.41	1.35	5.32E+20	36.8[T88]	SAB(rs)c	5.0	4.2e+10	7.3	123	· · ·
NGC2300	127.71	27.81	1.41	1.02	5.27E+20	31.0[T88]	SA0o	-2.0	2.9e+10	<0.052	123	· · ·
NGC2434	281.00	-21.54	1.23	1.15	1.20E+21	21.58[SBF]	E0	-5.0	1.7e+10	<0.023	121	· · ·
NGC2403	150.57	29.19	10.94	6.15	4.13E+20	3.133[KP]	SAB(s)cd	6.0	6.4e+09	0.23	19	HII
NGC2500	168.00	31.57	1.44	1.31	4.72E+20	10.1[T88]	SB(rs)d	7.0	2.5e+09	0.096	275	· · ·
NGC2541	170.18	33.48	3.15	1.58	4.62E+20	11.27[KP]	SA(s)cd	6.0	4.6e+09	0.08	292	LINER
NGC2552	169.10	34.29	1.73	1.14	4.40E+20	10.0[T88]	SA(s)m	9.0	1.9e+09	0.028	213	· · ·
PGC24175	248.57	8.58	0.87	0.68	9.84E+20	10.5[T88]	I0	90.0	1.8e+09	<0.0023	169	Sbrst
NGC2683	190.46	38.76	4.67	1.09	3.02E+20	7.73[SBF]	SA(rs)b	3.0	1.3e+10	0.25	307	LINER Sy2
NGC2681	167.32	39.68	1.82	1.66	2.45E+20	17.22[SBF]	SAB(rs)0/a	.0	2.0e+10	0.95	46	Sy
NGC2782	182.15	43.68	1.73	1.28	1.76E+20	37.3[T88]	SAB(rs)a	1.0	3.4e+10	5.4	152	Sbrst Sy1
NGC2798	179.53	44.30	1.29	0.49	1.45E+20	27.1[T88]	SB(s)a	1.0	1.2e+10	6.3	204	· · ·
NGC2799	179.54	44.32	0.93	0.24	1.45E+20	27.4[T88]	SB(s)m	9.0	3.8e+09	<0.0061	204	· · ·
NGC2787	144.05	38.05	1.58	1.02	4.32E+20	7.48[SBF]	SB(r)0+	-1.0	2.0e+09	0.016	71	LINER
NGC2841	166.94	44.15	4.06	1.77	1.45E+20	12.0[T88]	SA(r)b	3.0	3.3e+10	0.19	73	LINER Sy1
NGC2865	252.96	18.94	1.23	0.91	6.50E+20	37.84[SBF]	E3	-5.0	3.0e+10	0.12	154	· · ·
NGC2986	255.04	23.72	1.58	1.38	4.37E+20	32.3[T88]	E2	-5.0	3.7e+10	<0.08	276	HII
NGC2992	249.71	28.78	1.77	0.55	5.26E+20	30.5[T88]	Sa	1.0	2.0e+10	<0.033	111	Sy1
NGC2993	249.76	28.77	0.67	0.46	5.27E+20	30.5[T88]	Sa	1.0	1.2e+10	4.6	111	HII

Table 1—Continued

galaxy	GLON[a] (deg)	GLAT[b] (deg)	R25[c] (′)	r25[d] (′)	nH[e] (cm^{-2})	Distance[f] (Mpc)	Morphol.[g] Type	Hubble[h] T	L_B[i] ($L_\odot$)	$f_\nu(60\mu m)$[j] (Jy)	Group No.	Notes[k]
NGC3031	142.09	40.90	13.46	7.06	4.16E+20	3.42[KP]	SA(s)ab	2.0	2.0e+10	0.24	4	LINER Sy1.8
NGC3034	141.40	40.57	5.61	2.13	3.98E+20	5.2[T88]	I0	90.0	7.9e+09	13.4	8	HII Sbrst
PGC28757	141.98	41.06	1.26	1.02	4.07E+20	3.42[KP]	Im	10.0	4.2e+07	<0.00053	4	···
NGC3078	261.78	21.80	1.26	1.05	4.76E+20	35.16[SBF]	E2	-5.0	3.2e+10	<0.061	212	···
NGC3073	157.99	48.25	0.64	0.60	8.22E+19	33.73[SBF]	SAB0-	-2.5	5.0e+09	0.11	159	···
NGC3065	138.44	39.45	0.85	0.83	3.06E+20	31.3[T88]	SA(r)0o	-2.0	1.1e+10	0.66	230	···
NGC3079	157.81	48.36	3.97	0.72	7.89E+19	17.3[T92]	SB(s)c	7.0	3.2e+10	6.7	159	LINER Sy2
NGC3066	138.47	39.49	0.55	0.49	3.09E+20	32.4[T88]	SAB(s)bc	4.0	8.0e+09	1.5	230	···
NGC3077	141.90	41.66	2.69	2.24	3.88E+20	4.04[SBF]	I0	90.0	1.4e+09	0.1	108	HII
NGC3115	247.78	36.78	3.62	1.23	4.32E+20	9.68[SBF]	S0-	-3.0	1.8e+10	<0.015	138	···
NGC3125	265.33	20.65	0.56	0.36	5.72E+20	11.5[NED]	E	-5.0	1.2e+09	0.3	228	···
NGC3169	238.20	45.65	2.18	1.38	2.61E+20	19.7[T88]	SA(s)a	1.0	2.5e+10	1.4	285	LINER
IC2560	269.42	19.03	1.58	1.00	6.51E+20	39.0[NED]	SB(r)b	3.3	4.0e+10	2.2	58	Sy2
NGC3185	213.22	54.70	1.17	0.79	2.12E+20	21.3[T88]	SB(r)a	1.0	6.1e+09	0.29	168	Sy2
NGC3190	213.03	54.85	2.18	0.77	2.12E+20	22.4[T88]	SA(s)a	1.0	2.1e+10	0.72	168	LINER
NGC3184	178.34	55.64	3.71	3.46	1.12E+20	8.7[T88]	SAB(rs)cd	6.0	8.5e+09	0.082	57	HII
NGC3226	216.93	55.44	1.58	1.41	2.14E+20	23.55[SBF]	E2	-5.0	9.0e+09	<0.045	277	LINER
NGC3239	221.64	54.82	2.51	1.66	2.74E+20	8.1[T88]	IB(s)m	10.0	2.4e+09	0.1	296	···
NGC3245A	201.64	58.17	1.66	0.17	2.09E+20	23.1[T88]	SB(s)b	3.0	4.0e+09	<0.0055	205	···
NGC3245	201.90	58.22	1.62	0.89	2.08E+20	20.89[SBF]	SA(r)0o	-2.0	1.5e+10	0.41	205	HII LINER
NGC3256	277.37	11.73	1.90	1.07	9.51E+20	37.4[T88]	peculiar	99.0	3.0e+10	55.4	63	HII
IC2574	140.20	43.60	6.59	2.68	2.37E+20	3.5[T92]	SAB(s)m	9.0	1.4e+09	0.013	198	···
NGC3274	203.75	59.21	1.07	0.51	1.86E+20	5.9[T88]	SABd	6.8	4.5e+08	0.015	319	···
NGC3310	156.61	54.06	1.55	1.20	1.13E+20	18.7[T88]	SAB(r)bc	4.0	2.2e+10	4.9	120	HII
NGC3344	210.04	61.25	3.54	3.23	2.22E+20	6.1[T88]	SAB(r)bc	4.0	3.6e+09	0.16	315	···
NGC3351	233.95	56.37	3.71	2.51	2.88E+20	9.55[KP]	SB(r)b	3.0	1.1e+10	0.82	33	HII Sbrst
NGC3368	234.43	57.01	3.79	2.62	2.83E+20	9.772[KP]	SAB(rs)ab	2.0	1.8e+10	0.47	89	LINER Sy
NGC3377	231.18	58.31	2.62	1.51	2.86E+20	11.22[SBF]	E5	-5.0	7.2e+09	0.0079	128	···
NGC3379	233.49	57.63	2.69	2.40	2.75E+20	10.57[SBF]	E1	-5.0	1.5e+10	<0.026	16	LINER
NGC3384	233.52	57.75	2.75	1.26	2.73E+20	11.59[SBF]	SB(s)0-	-3.0	1.0e+10	<0.017	16	···
NGC3395	192.93	63.14	1.04	0.61	1.98E+20	27.4[T88]	SAB(rs)cd	6.0	1.7e+10	<0.017	173	···
NGC3396	192.90	63.16	1.55	0.59	1.98E+20	21.8[T92]	IBm	10.0	8.6e+09	<0.016	173	···
NGC3412	232.87	58.70	1.82	1.02	2.59E+20	11.32[SBF]	SB(s)0o	-2.0	5.8e+09	<0.0086	201	···
NGC3414	204.08	63.42	1.77	1.28	2.12E+20	25.23[SBF]	S0	-2.0	1.8e+10	0.054	187	···

Table 1—Continued

galaxy	GLON[a] (deg)	GLAT[b] (deg)	R25[c] (′)	r25[d] (′)	nH[e] (cm^{-2})	Distance[f] (Mpc)	Morphol.[g] Type	Hubble[h] T	L_B[i] ($L_\odot$)	$f_\nu(60\mu m)$[j] (Jy)	Group No.	Notes[k]
NGC3413	193.34	63.48	1.09	0.45	2.03E+20	8.6[NED]	S0	-2.0	6.7e+08	0.033	314	···
NGC3432	184.77	63.16	3.38	0.74	1.80E+20	12.7[T92]	SB(s)m	9.0	9.6e+09	0.62	295	HII LINER
NGC3445	149.59	53.67	0.81	0.74	5.84E+19	32.4[T88]	SAB(s)m	9.0	1.2e+10	0.99	251	···
NGC3458	149.21	53.72	0.69	0.44	5.85E+19	29.5[T88]	SAB0	-2.0	7.2e+09	<0.0094	86	···
NGC3489	234.38	60.91	1.77	1.02	1.92E+20	12.08[SBF]	SAB(rs)0+	-1.0	7.8e+09	<0.0092	303	Sy2
NGC3486	202.07	65.49	3.54	2.62	1.91E+20	12.3[T92]	SAB(r)c	5.0	1.1e+10	0.42	300	Sy2
NGC3495	249.89	54.72	2.45	0.60	4.15E+20	17.6[T92]	Sd	7.0	2.4e+10	0.25	255	···
NGC3507	227.11	63.57	1.69	1.44	1.63E+20	11.8[T92]	SB(s)b	3.0	4.8e+09	<0.012	130	LINER
NGC3521	255.54	52.83	5.48	2.56	4.06E+20	11.5[T92]	SAB(rs)bc	4.0	3.9e+10	2.6	202	LINER
NGC3564	281.71	21.13	0.89	0.38	7.58E+20	37.6[T88]	S0	-2.0	2.0e+10	0.33	137	···
NGC3568	281.70	21.24	1.26	0.40	7.57E+20	32.7[T88]	SB(s)c	5.0	3.4e+10	3.4	137	···
NGC3556	148.32	56.26	4.35	1.12	7.94E+19	8.6[T92]	SB(s)cd	6.0	1.3e+10	0.87	101	···
NGC3585	277.25	31.17	2.34	1.29	5.58E+20	20.04[SBF]	E6	-5.0	3.4e+10	0.029	142	···
NGC3593	240.42	63.21	2.62	0.97	1.78E+20	5.5[T88]	SA(s)0/a	.0	1.2e+09	0.25	294	HII Sy2
NGC3600	170.29	65.68	2.04	0.43	1.88E+20	10.8[T92]	Sa	1.0	3.2e+09	0.068	274	···
NGC3605	230.64	66.38	0.77	0.51	1.48E+20	20.70[SBF]	E4	-5.0	4.2e+09	<0.006	133	···
NGC3607	230.59	66.42	2.45	1.23	1.48E+20	22.80[SBF]	SA(s)0o	-2.0	3.9e+10	<0.056	133	···
NGC3608	230.40	66.48	1.58	1.28	1.49E+20	22.91[SBF]	E2	-5.0	1.7e+10	<0.038	133	LINER
NGC3610	143.54	54.46	1.35	1.15	7.34E+19	21.38[SBF]	E5	-5.0	1.7e+10	<0.025	241	···
NGC3623	241.33	64.22	4.89	1.44	2.16E+20	12.3[T92]	SAB(rs)a	1.0	3.2e+10	0.2	313	LINER
NGC3627	241.95	64.42	4.56	2.08	2.43E+20	8.75[KP]	SAB(s)b	3.0	2.6e+10	1.9	302	LINER Sy2
NGC3628	240.85	64.78	7.40	1.48	2.22E+20	10.6[T92]	Sb	3.0	3.3e+10	2.5	29	LINER
NGC3631	149.53	59.04	2.51	2.40	1.03E+20	21.6[T88]	SA(s)c	5.0	2.9e+10	1.6	93	···
NGC3640	256.92	57.80	1.99	1.58	4.31E+20	27.04[SBF]	E3	-5.0	3.8e+10	<0.082	210	···
NGC3641	256.98	57.77	0.54	0.54	4.31E+20	26.67[SBF]	E	-5.3	2.8e+09	<0.0074	210	···
NGC3665	174.71	68.49	1.23	1.02	2.06E+20	32.4[T88]	SA(s)0o	-2.0	3.4e+10	0.9	177	···
NGC3675	163.67	66.19	2.94	1.54	2.16E+20	16.1[T92]	SA(s)b	3.0	2.5e+10	1.3	304	LINER
NGC3683	143.81	56.72	0.93	0.35	8.88E+19	28.4[T88]	SB(s)c	5.0	1.3e+10	5.1	52	···
PGC35286	127.84	37.33	0.72	0.41	3.83E+20	1.4[T88]	peculiar	99.0	4.8e+06	0.00034	196	···
NGC3718	147.01	60.22	4.06	1.99	1.08E+20	17.0[T88]	SB(s)a	1.0	1.5e+10	0.091	220	LINER Sy1
NGC3877	150.72	65.96	2.75	0.64	2.22E+20	17.0[T88]	SA(s)c	5.0	2.1e+10	0.74	22	···
NGC3898	139.79	58.96	2.18	1.28	1.08E+20	21.9[T88]	SA(s)ab	2.0	2.2e+10	0.091	104	HII LINER
NGC3923	287.28	32.22	2.94	1.94	6.21E+20	22.91[SBF]	E4	-5.0	4.6e+10	<0.11	165	···
NGC3945	135.33	55.03	2.62	1.73	1.66E+20	22.5[T88]	SB(rs)0+	-1.0	2.3e+10	<0.082	183	LINER

Table 1—Continued

galaxy	GLON[a] (deg)	GLAT[b] (deg)	R25[c] (′)	r25[d] (′)	nH[e] (cm^{-2})	Distance[f] (Mpc)	Morphol.[g] Type	Hubble[h] T	L_B[i] ($L_\odot$)	$f_\nu(60\mu m)$[j] (Jy)	Group No.	Notes[k]
NGC3955	286.14	37.83	1.44	0.47	4.74E+20	20.6[T88]	S0/a	.0	1.0e+10	1.6	170	HII
NGC3982	138.83	60.27	1.17	1.02	1.22E+20	17.0[T88]	SAB(r)b	3.0	9.5e+09	0.86	200	Sy2
NGC3985	145.94	66.27	0.64	0.41	2.10E+20	8.3[T88]	SB(s)m	9.0	7.4e+08	0.043	312	···
NGC3998	138.17	60.06	1.35	1.12	1.22E+20	14.13[SBF]	SA(r)0o	-2.0	7.8e+09	0.04	191	LINER Sy1
NGC4013	151.86	70.09	2.62	0.51	1.39E+20	17.0[T88]	Sb	3.0	1.4e+10	0.91	51	LINER
NGC4020	193.90	78.04	1.04	0.46	1.57E+20	8.0[T88]	SBd	7.3	7.5e+08	<0.0011	309	···
NGC4026	141.94	64.20	2.62	0.64	1.98E+20	13.61[SBF]	S0	-2.0	6.6e+09	0.0083	181	···
NGC4036	132.98	54.25	2.13	0.85	1.89E+20	24.6[T88]	S0-	-3.0	2.4e+10	0.14	186	LINER
NGC4038	286.96	42.46	2.62	1.54	3.89E+20	25.5[T88]	SB(s)m	9.0	5.7e+10	<0.094	10	···
NGC4039	286.97	42.45	1.55	0.79	3.89E+20	25.3[T88]	SA(s)m	9.0	5.1e+10	<0.028	10	···
NGC4062	185.27	78.65	2.04	0.87	1.63E+20	13.5[T92]	SA(s)c	5.0	8.6e+09	0.21	281	HII
NGC4096	143.55	67.79	3.30	0.89	1.74E+20	11.2[T92]	SAB(rs)c	5.0	1.1e+10	0.43	318	···
NGC4102	138.08	63.07	1.51	0.87	1.77E+20	17.0[T88]	SAB(s)b	3.0	1.0e+10	6.6	242	HII LINER
NGC4111	149.53	71.69	2.29	0.49	1.40E+20	15.00[SBF]	SA(r)0+	-1.0	7.9e+09	<0.0091	188	HII LINER
NGC4125	130.19	51.34	2.88	1.58	1.84E+20	23.88[SBF]	E6	-5.0	4.7e+10	0.15	97	LINER
NGC4136	193.63	80.34	1.99	1.86	1.62E+20	9.7[T88]	SAB(r)c	5.0	3.3e+09	0.059	68	HII
IC3019	264.08	73.60	0.71	0.66	2.55E+20	24.1[NED]	E	-5.0	2.0e+09	<0.0099	222	···
NGC4138	147.29	71.40	1.29	0.85	1.36E+20	13.80[SBF]	SA(r)0+	-1.0	4.2e+09	<0.0075	217	Sy1.9
NGC4143	149.18	72.40	1.15	0.73	1.64E+20	15.92[SBF]	SAB(s)0o	-2.0	6.8e+09	<0.0076	268	LINER
NGC4151	155.07	75.06	3.15	2.23	1.98E+20	20.3[T88]	SAB(rs)ab	2.0	3.3e+10	1.2	42	Sy1.5
NGC4150	190.45	80.47	1.17	0.81	1.62E+20	13.74[SBF]	SA(r)0o	-2.0	3.2e+09	0.1	306	···
NGC4168	267.67	73.34	1.38	1.15	2.56E+20	16.8[T88]	E2	-5.0	6.5e+09	<0.017	236	Sy1.9
NGC4203	173.03	80.08	1.69	1.58	1.19E+20	15.14[SBF]	SAB0-	-3.0	8.0e+09	0.062	301	LINER
NGC4204	249.04	79.50	1.82	1.45	2.39E+20	7.9[T88]	SB(s)dm	8.0	7.9e+08	0.02	289	···
NGC4207	275.44	70.51	0.79	0.41	1.76E+20	8.0[NED]	S	···	5.6e+08	0.086	317	···
NGC4214	160.25	78.07	4.26	3.31	1.49E+20	3.5[T88]	IAB(s)m	10.0	1.7e+09	0.099	36	HII
NGC4217	139.90	68.85	2.62	0.77	1.23E+20	17.0[T88]	Sb	3.0	1.3e+10	1.2	95	HII
NGC4216	270.44	73.74	4.06	0.89	2.68E+20	16.8[T88]	SAB(s)b	3.0	4.6e+10	0.12	227	HII LINER
NGC4233	278.71	68.87	1.20	0.55	1.53E+20	35.1[T88]	S0o	-1.5	1.3e+10	0.11	189	···
NGC4234	282.19	65.16	0.67	0.63	1.70E+20	32.9[T88]	SB(s)m	8.7	8.3e+09	0.73	194	···
NGC4244	154.56	77.16	8.30	0.95	1.67E+20	4.2[T92]	SA(s)cd	6.0	5.3e+09	0.004	115	HII
NGC4245	192.51	82.16	1.44	1.09	1.71E+20	9.7[T88]	SB(r)0/a	.0	2.3e+09	0.033	280	HII
NGC4258	138.32	68.84	9.31	3.62	1.16E+20	7.727[KP]	SAB(s)bc	4.0	3.6e+10	0.59	41	LINER Sy1.9
NGC4257	281.72	67.26	0.63	0.18	1.55E+20	36.7[NED]	Sab	2.0	2.3e+09	<0.0055	143	···

Table 1—Continued

galaxy	GLON[a] (deg)	GLAT[b] (deg)	R25[c] (′)	r25[d] (′)	nH[e] (cm^{-2})	Distance[f] (Mpc)	Morphol.[g] Type	Hubble[h] T	L_B[i] ($L_\odot$)	$f_\nu(60\mu m)$[j] (Jy)	Group No.	Notes[k]
NGC4261	281.80	67.37	2.04	1.82	1.55E+20	31.62[SBF]	E2	-5.0	4.4e+10	<0.13	143	LINER
NGC4274	191.39	82.62	3.38	1.26	1.75E+20	9.7[T88]	SB(r)ab	2.0	8.5e+09	0.19	298	···
NGC4278	193.79	82.77	2.04	1.90	1.77E+20	16.07[SBF]	E1	-5.0	1.6e+10	0.065	9	LINER Sy1
NGC4283	193.44	82.81	0.76	0.74	1.77E+20	15.70[SBF]	E0	-5.0	2.8e+09	<0.005	9	···
NGC4286	193.02	82.88	0.79	0.50	1.79E+20	8.6[NED]	SA(r)0/a	.0	3.3e+08	<0.0011	9	···
NGC4303	284.37	66.27	3.23	2.88	1.67E+20	15.2[T88]	SAB(rs)bc	4.0	3.2e+10	4.0	157	HII Sy2
NGC4309	282.45	68.85	0.93	0.54	1.59E+20	11.6[NED]	SAB(r)0+	-1.0	7.1e+08	0.056	87	···
NGC4310	193.21	83.28	1.12	0.60	1.77E+20	9.7[T88]	SAB(r)0+	-1.0	8.5e+08	0.034	278	···
NGC4312	271.38	76.61	2.29	0.56	2.46E+20	2.0[NED]	SA(rs)ab	1.5	1.1e+08	0.0038	290	···
NGC4314	187.68	83.08	2.08	1.85	1.78E+20	9.7[T88]	SB(rs)a	1.0	4.9e+09	0.16	43	LINER
NGC4321	271.14	76.90	3.71	3.16	2.39E+20	14.13[KP]	SAB(s)bc	4.0	3.1e+10	1.7	136	HII LINER
NGC4343	283.55	68.77	1.26	0.36	1.60E+20	13.5[NED]	SA(rs)b	3.0	3.2e+09	0.098	252	···
IC3256	283.48	68.87	0.64	0.30	1.60E+20	10.0[NED]	S0-	-3.0	6.9e+08	<0.00068	134	···
IC3259	283.48	69.01	0.85	0.47	1.61E+20	18.9[NED]	SAB(s)dm	8.0	1.5e+09	<0.0051	134	···
IC3260	283.59	68.94	0.81	0.27	1.61E+20	12.5[NED]	SAB(s)0o	-2.0	5.3e+08	<0.0013	134	···
NGC4350	270.17	77.78	1.51	0.72	2.56E+20	16.8[T88]	SA0	-2.0	7.4e+09	0.05	247	···
NGC4365	283.80	69.18	3.46	2.51	1.62E+20	20.42[SBF]	E3	-5.0	4.1e+10	<0.13	17	···
NGC4370	284.00	69.33	0.71	0.37	1.64E+20	10.4[NED]	Sa	1.0	7.3e+08	0.046	17	···
NGC4374	278.20	74.48	3.23	2.81	2.60E+20	18.37[SBF]	E1	-5.0	5.2e+10	0.076	27	LINER
NGC4382	267.72	79.24	3.54	2.75	2.52E+20	18.45[SBF]	SA(s)0+	-1.0	5.3e+10	0.023	126	···
NGC4387	278.84	74.47	0.89	0.55	2.60E+20	21.38[SBF]	E	-5.0	5.0e+09	<0.008	66	···
NGC4388	279.12	74.34	2.81	0.64	2.60E+20	16.8[T88]	SA(s)b	3.0	2.1e+10	1.3	167	Sy2
NGC4395	162.08	81.54	6.59	5.48	1.35E+20	3.6[T88]	SA(s)m	9.0	1.2e+09	0.014	23	LINER Sy1.8
NGC4406	279.08	74.64	4.46	2.88	2.62E+20	17.14[SBF]	E3	-5.0	5.8e+10	0.015	66	···
NGC4414	174.52	83.18	1.82	1.02	1.43E+20	17.22[KP]	SA(rs)c	5.0	2.6e+10	4.0	305	LINER
NGC4419	276.45	76.64	1.66	0.56	2.66E+20	13.49[SBF]	SB(s)a	1.0	6.4e+09	0.66	91	HII LINER
NGC4435	280.18	74.89	1.38	1.00	2.66E+20	16.8[T88]	SB(s)0o	-2.0	9.9e+09	0.23	160	HII LINER
NGC4438	280.34	74.83	4.26	1.58	2.66E+20	16.8[T88]	SA(s)0/a	.0	2.8e+10	0.55	160	LINER
NGC4449	136.85	72.40	3.08	2.18	1.37E+20	3.0[T88]	IBm	10.0	1.5e+09	<0.0022	158	HII
NGC4448	195.35	84.67	1.95	0.71	1.79E+20	9.7[T88]	SB(r)ab	2.0	4.5e+09	0.059	288	···
NGC4450	273.91	78.64	2.62	1.94	2.37E+20	16.8[T88]	SA(s)ab	2.0	2.2e+10	0.17	257	LINER
NGC4457	289.13	65.84	1.35	1.15	1.82E+20	17.4[T88]	SAB(s)0/a	.0	1.1e+10	0.67	132	LINER
NGC4459	280.11	75.85	1.77	1.34	2.67E+20	16.14[SBF]	SA(r)0+	-1.0	1.3e+10	0.2	203	HII LINER
NGC4464	286.50	70.32	0.54	0.41	1.66E+20	16.8[T88]	S	···	1.9e+09	<0.0023	234	···

Table 1—Continued

galaxy	GLON[a] (deg)	GLAT[b] (deg)	R25[c] (′)	r25[d] (′)	nH[e] (cm^{-2})	Distance[f] (Mpc)	Morphol.[g] Type	Hubble[h] T	L_B[i] ($L_\odot$)	$f_\nu(60\mu m)$[j] (Jy)	Group No.	Notes[k]
NGC4467	286.73	70.17	0.59	0.47	1.66E+20	16.8[T88]	E2	-5.0	6.9e+08	<0.0028	40	···
NGC4470	286.95	70.01	0.64	0.46	1.65E+20	31.2[NED]	Sa	1.0	9.9e+09	0.79	40	HII
NGC4472	286.92	70.19	5.12	4.16	1.66E+20	16.29[SBF]	E2	-5.0	7.6e+10	<0.2	40	Sy2
NGC4473	281.61	75.40	2.23	1.25	2.64E+20	15.70[SBF]	E5	-5.0	1.5e+10	<0.024	153	···
PGC41258	287.14	70.14	0.55	0.46	1.65E+20	3.7[NED]	Im	10.0	2.7e+07	<0.00012	40	···
NGC4485	137.98	74.81	1.15	0.81	1.78E+20	9.3[T88]	IB(s)m	10.0	1.7e+09	<0.0029	35	HII
NGC4490	138.00	74.87	3.15	1.54	1.78E+20	7.8[T88]	SB(s)d	7.0	1.1e+10	1.3	35	···
NGC4491	284.84	73.63	0.85	0.43	2.32E+20	6.6[NED]	SB(s)a	1.0	3.5e+08	0.055	284	···
NGC4494	228.62	85.32	2.39	1.77	1.52E+20	17.06[SBF]	E1	-5.0	2.7e+10	0.028	74	LINER
NGC4501	282.33	76.51	3.46	1.86	2.48E+20	16.8[T88]	SA(rs)b	3.0	5.0e+10	2.3	77	Sy2
NGC4526	290.16	70.14	3.62	1.20	1.65E+20	16.90[SBF]	SAB(s)0o	-2.0	2.7e+10	0.72	124	···
NGC4527	292.60	65.18	3.08	1.04	1.87E+20	13.5[T88]	SAB(s)bc	4.0	1.5e+10	2.1	246	HII LINER
NGC4548	285.69	76.83	2.69	2.14	2.36E+20	15[KP]	SB(rs)b	3.0	1.7e+10	0.15	265	LINER Sy
NGC4550	288.10	74.63	1.66	0.47	2.57E+20	15.85[SBF]	SB0o	-1.5	4.4e+09	0.016	287	LINER
NGC4552	287.93	74.97	2.56	2.33	2.57E+20	15.35[SBF]	E0	-5.0	2.1e+10	0.017	107	HII LINER
NGC4559	198.35	86.47	5.36	2.18	1.49E+20	5.8[T92]	SAB(rs)cd	6.0	6.5e+09	0.092	44	HII
NGC4561	277.91	81.44	0.76	0.65	2.11E+20	12.3[T88]	SB(rs)dm	8.0	1.7e+09	0.082	260	···
NGC4565	230.73	86.44	7.92	1.07	1.30E+20	17.46[SBF]	SA(s)b	3.0	1.1e+11	1.3	59	Sy3
NGC4564	289.56	73.92	1.77	0.74	2.37E+20	15.00[SBF]	E	-5.0	5.7e+09	<0.01	176	···
IC3583	288.28	75.71	1.09	0.56	2.48E+20	16.8[T88]	IBm	10.0	2.2e+09	0.062	67	···
NGC4569	288.47	75.62	4.77	2.18	2.49E+20	16.8[T88]	SAB(rs)ab	2.0	5.3e+10	0.97	67	LINER Sy
NGC4570	292.42	69.82	1.90	0.57	1.63E+20	16.8[T88]	S0	-2.0	8.3e+09	<0.011	233	···
NGC4589	124.23	42.90	1.58	1.28	1.99E+20	21.98[SBF]	E2	-5.0	1.6e+10	0.046	180	LINER
NGC4578	291.68	72.12	1.66	1.23	1.90E+20	18.54[SBF]	SA(r)0o	-2.0	7.2e+09	<0.025	232	···
NGC4579	290.40	74.36	2.94	2.34	2.47E+20	16.8[T88]	SAB(rs)b	3.0	3.3e+10	0.74	69	LINER Sy1.9
NGC4596	293.30	72.83	1.99	1.48	1.98E+20	16.8[T88]	SB(r)0+	-1.0	1.1e+10	0.062	207	LINER
NGC4594	298.46	51.15	4.35	1.77	3.77E+20	9.77[SBF]	SA(s)a	1.0	6.5e+10	0.13	79	LINER Sy1.9
IC3647	293.94	73.16	0.77	0.43	2.02E+20	8.5[NED]	Im	10.0	1.8e+08	<0.00088	235	···
NGC4612	295.73	70.05	1.23	0.98	1.77E+20	16.8[T88]	SAB0o	-2.0	4.9e+09	<0.012	231	···
NGC4625	130.23	75.72	1.09	0.95	1.51E+20	8.2[T88]	SAB(rs)m	9.0	7.4e+08	0.036	308	···
NGC4627	142.96	84.18	1.29	0.89	1.27E+20	7.2[NED]	E4	-5.0	5.2e+08	<0.0021	102	···
NGC4621	294.37	74.36	2.69	1.86	2.15E+20	18.28[SBF]	E5	-5.0	3.2e+10	<0.06	162	···
NGC4631	142.82	84.22	7.74	1.35	1.27E+20	6.9[T88]	SB(s)d	7.0	2.6e+10	1.8	102	···
NGC4623	296.07	70.43	1.12	0.36	1.81E+20	16.8[T88]	SB0+	-.5	2.3e+09	<0.0041	223	···

Table 1—Continued

galaxy	GLON[a] (deg)	GLAT[b] (deg)	R25[c] (′)	r25[d] (′)	nH[e] (cm^{-2})	Distance[f] (Mpc)	Morphol.[g] Type	Hubble[h] T	L_B[i] ($L_\odot$)	$f_\nu(60\mu m)$[j] (Jy)	Group No.	Notes[k]
NGC4636	297.75	65.47	3.01	2.34	1.81E+20	14.66[SBF]	E0	-5.0	2.2e+10	0.014	25	LINER
NGC4639	294.30	75.99	1.38	0.93	2.35E+20	20.8[KP]	SAB(rs)bc	4.0	1.2e+10	0.27	320	Sy1.8
NGC4647	295.75	74.34	1.44	1.14	2.20E+20	16.8[T88]	SAB(rs)c	5.0	8.2e+09	0.67	135	···
NGC4649	295.88	74.31	3.71	3.02	2.20E+20	16.83[SBF]	E2	-5.0	5.8e+10	0.099	135	···
NGC4654	295.43	75.89	2.45	1.41	2.32E+20	16.8[T88]	SAB(rs)cd	6.0	2.2e+10	1.8	245	···
NGC4670	212.67	88.63	0.72	0.55	1.05E+20	11.0[T88]	SB(s)0/a	.0	1.3e+09	0.14	273	···
IC3773	299.40	73.05	0.97	0.36	1.67E+20	14.5[NED]	E	-5.0	8.7e+08	<0.0026	224	···
NGC4691	301.35	59.53	1.41	1.15	1.90E+20	22.5[T88]	SB(s)0/a	.0	1.8e+10	3.2	195	HII
NGC4698	300.58	71.35	1.99	1.23	1.87E+20	16.8[T88]	SA(s)ab	2.0	1.4e+10	0.033	148	Sy2
NGC4697	301.63	57.06	3.62	2.34	2.12E+20	11.75[SBF]	E6	-5.0	2.0e+10	0.029	129	···
NGC4696	302.41	21.56	2.23	1.62	8.06E+20	35.48[SBF]	E1+	-4.0	8.9e+10	0.057	11	···
NGC4701	301.54	66.26	1.38	1.07	1.87E+20	20.5[T88]	SA(s)cd	6.0	6.6e+09	0.51	209	···
NGC4713	301.95	68.18	1.35	0.85	1.95E+20	10.9[T92]	SAB(rs)d	7.0	3.3e+09	0.23	244	LINER
NGC4750	123.07	44.25	1.02	0.93	1.68E+20	26.1[T88]	SA(rs)ab	2.0	1.7e+10	1.4	240	LINER
NGC4725	295.11	88.36	5.36	3.79	9.97E+19	11.64[KP]	SAB(r)ab	2.0	2.6e+10	0.26	75	Sy2
NGC4736	123.36	76.01	5.61	4.56	1.44E+20	5.20[SBF]	SA(r)ab	2.0	1.3e+10	0.75	64	LINER Sy2
NGC4754	303.70	74.18	2.29	1.23	2.09E+20	16.83[SBF]	SB(r)0-	-3.0	1.3e+10	<0.029	239	···
NGC4762	304.27	74.10	4.35	0.83	2.04E+20	16.8[T88]	SB(r)0o	-2.0	1.7e+10	<0.037	218	LINER
NGC4772	304.14	65.04	1.69	0.85	1.79E+20	16.3[T88]	SA(s)a	1.0	7.2e+09	<0.014	229	LINER
PGC44014	305.01	62.97	1.55	0.93	1.55E+20	14.2[T88]	SB(s)d	7.0	3.8e+09	0.051	249	···
NGC4826	315.71	84.42	5.00	2.69	2.57E+20	7.48[SBF]	SA(rs)ab	2.0	2.6e+10	0.86	299	Sy2
NGC4945	305.27	13.34	9.98	1.90	1.57E+21	5.2[T88]	SB(s)cd	6.0	4.4e+10	7.2	116	Sy2
NGC5005	101.61	79.25	2.88	1.38	1.08E+20	21.3[T88]	SAB(rs)bc	4.0	5.9e+10	4.5	243	LINER Sy2
NGC5033	98.05	79.45	5.36	2.51	9.96E+19	15.2[T92]	SA(s)c	5.0	2.9e+10	1.5	266	Sy1.9
PGC46093	106.40	74.36	0.79	0.29	1.32E+20	5.2[NED]	Im	10.0	···	<0.00022	72	···
NGC5044	311.23	46.10	1.48	1.48	4.93E+20	31.19[SBF]	E0	-5.0	3.2e+10	0.061	166	···
NGC5055	106.01	74.28	6.29	3.62	1.32E+20	8.5[T92]	SA(rs)bc	4.0	2.7e+10	1.3	72	HII LINER
NGC5068	311.49	41.38	3.62	3.15	7.81E+20	6.7[T88]	SAB(rs)cd	6.0	6.4e+09	0.1	216	···
NGC5102	309.73	25.84	4.35	1.41	4.33E+20	4.00[SBF]	SA0-	-3.0	2.5e+09	0.0059	144	···
NGC5128	309.52	19.42	12.85	9.97	8.62E+20	4.21[SBF]	S0	-2.0	3.3e+10	1.3	7	Sy2
NGC5204	113.50	58.01	2.51	1.51	1.39E+20	4.3[T92]	SA(s)m	9.0	7.3e+08	0.019	5	HII
NGC5170	315.66	43.96	4.16	0.51	6.95E+20	33.7[T92]	SA(s)c	5.0	1.1e+11	0.56	146	···
NGC5194	104.85	68.56	5.61	3.46	1.57E+20	7.7[T88]	SA(s)bc	4.0	3.1e+10	0.88	24	HII Sy2.5
NGC5195	104.89	68.48	2.88	2.29	1.56E+20	7.66[SBF]	I0	90.0	6.0e+09	0.42	24	LINER

Table 1—Continued

galaxy	GLON[a] (deg)	GLAT[b] (deg)	R25[c] (′)	r25[d] (′)	nH[e] (cm^{-2})	Distance[f] (Mpc)	Morphol.[g] Type	Hubble[h] T	L_B[i] ($L_\odot$)	$f_\nu(60\mu m)$[j] (Jy)	Group No.	Notes[k]
NGC5198	104.12	69.02	1.04	0.89	1.75E+20	39.0[T88]	E1	-5.0	1.9e+10	<0.051	193	···
NGC5236	314.58	31.97	6.44	5.74	3.82E+20	4.7[T88]	SAB(s)c	5.0	2.2e+10	2.7	61	HII Sbrst
PGC48179	321.58	51.37	1.15	0.98	3.38E+20	22.7[T88]	SB(s)m	8.8	7.4e+09	0.18	83	···
NGC5253	314.86	30.10	2.51	0.98	3.87E+20	3.221[KP]	peculiar	10.0	1.0e+09	0.14	32	HII Sbrst
NGC5273	74.35	76.25	1.38	1.26	9.40E+19	16.52[SBF]	SA(s)0o	-2.0	4.7e+09	0.11	316	Sy1.9
NGC5322	110.28	55.49	2.94	1.94	1.81E+20	31.19[SBF]	E3	-5.0	5.8e+10	0.18	182	LINER
NGC5347	62.19	75.23	0.85	0.68	1.23E+20	36.7[T88]	SB(rs)ab	2.0	1.2e+10	0.85	139	Sy2
NGC5350	82.84	71.59	1.58	1.14	9.79E+19	37.8[T88]	SB(r)b	3.0	3.5e+10	1.4	253	Sbrst
NGC5354	82.66	71.62	0.72	0.66	9.77E+19	34.3[NED]	S0	-2.0	2.1e+10	0.22	253	LINER
NGC5353	82.61	71.63	1.09	0.55	9.76E+19	37.8[T88]	S0	-2.0	3.6e+10	0.19	253	···
NGC5355	82.62	71.55	0.60	0.36	9.86E+19	31.3[NED]	S0	-2.0	4.0e+09	<0.0075	253	···
NGC5358	82.37	71.56	0.54	0.17	9.87E+19	32.0[NED]	S0/a	.0	3.3e+09	<0.0034	253	···
NGC5457	102.04	59.77	14.42	13.46	1.16E+20	6.855[KP]	SAB(rs)cd	6.0	3.8e+10	0.082	2	···
NGC5426	333.25	52.51	1.48	0.81	2.41E+20	35.9[T88]	SA(s)c	5.0	2.6e+10	<0.056	206	···
NGC5427	333.28	52.55	1.41	1.20	2.42E+20	38.1[T88]	SA(s)c	5.0	4.5e+10	3.2	206	Sy2
NGC5474	100.83	60.19	2.39	2.13	1.18E+20	6.0[T88]	SA(s)cd	6.0	1.7e+09	0.021	311	HII
NGC5477	101.60	59.49	0.83	0.66	1.16E+20	6.4[T88]	SA(s)m	9.0	1.3e+08	0.0053	2	···
PGC50779	311.33	-3.81	3.46	1.51	5.57E+21	4.2[T88]	SA(s)b	3.0	1.1e+10	2.0	31	Sy2
NGC5506	339.15	53.81	1.41	0.43	3.81E+20	28.7[T88]	Sa	1.0	1.6e+10	3.2	85	Sy1.9
NGC5507	339.23	53.85	0.85	0.47	3.84E+20	34.3[T88]	SAB(r)0o	-2.3	8.6e+09	<0.017	85	···
NGC5585	101.00	56.47	2.88	1.86	1.38E+20	7.0[T92]	SAB(s)d	7.0	2.9e+09	0.022	221	HII
NGC5678	100.05	54.50	1.66	0.81	1.32E+20	35.6[T88]	SAB(rs)b	3.0	4.2e+10	5.4	250	LINER
NGC5643	321.45	15.03	2.29	1.99	8.34E+20	16.9[T88]	SAB(rs)c	5.0	3.6e+10	2.4	214	Sy2
NGC5746	354.97	52.95	3.71	0.66	3.27E+20	29.4[T88]	SAB(rs)b	3.0	1.2e+11	0.51	140	···
NGC5774	359.41	52.49	1.51	1.23	3.46E+20	26.8[T88]	SAB(rs)d	7.0	1.1e+10	0.18	103	···
NGC5775	359.43	52.42	2.08	0.50	3.48E+20	26.7[T88]	SBc	5.0	3.6e+10	5.5	103	···
NGC5813	359.18	49.85	2.08	1.51	4.21E+20	32.21[SBF]	E1	-5.0	4.3e+10	<0.12	119	···
NGC5838	.73	49.32	2.08	0.74	4.19E+20	28.5[T88]	SA0-	-3.0	2.6e+10	0.27	190	LINER
NGC5866	92.03	52.49	2.34	0.98	1.46E+20	15.35[SBF]	SA0+	-1.0	1.7e+10	0.52	70	HII LINER
NGC5879	93.23	51.40	2.08	0.67	1.46E+20	12.3[T92]	SA(rs)bc	4.0	6.5e+09	0.2	94	LINER
NGC5949	100.57	44.97	1.12	0.52	1.97E+20	10.9[T92]	SA(r)bc	4.0	2.2e+09	0.064	264	···
NGC5953	23.92	50.35	0.81	0.67	3.27E+20	33.0[T88]	SAa	1.0	···	4.9	82	LINER Sy2
NGC5954	23.94	50.34	0.64	0.30	3.26E+20	32.1[T88]	SAB(rs)cd	6.0	···	<0.007	82	Sy2
NGC6278	43.57	33.95	1.02	0.60	4.92E+20	37.2[NED]	S0	-2.0	1.2e+10	<0.031	178	···

Table 1—Continued

galaxy	GLON[a] (deg)	GLAT[b] (deg)	R25[c] (′)	r25[d] (′)	nH[e] (cm^{-2})	Distance[f] (Mpc)	Morphol.[g] Type	Hubble[h] T	L_B[i] ($L_\odot$)	$f_\nu(60\mu m)$[j] (Jy)	Group No.	Notes[k]
NGC6503	100.57	30.64	3.54	1.20	4.09E+20	6.1[T88]	SA(s)cd	6.0	5.2e+09	0.17	81	HII LINER
NGC6500	43.76	20.24	1.09	0.81	7.39E+20	40.0[NED]	SAab	1.7	2.6e+10	0.46	286	LINER
NGC6690	101.05	26.83	1.90	0.63	5.91E+20	12.8[T92]	Sd	7.0	4.2e+09	0.051	259	· · ·
PGC63552	78.69	10.63	1.00	0.59	1.33E+21	10.9[NED]	S	· · ·	5.4e+09	0.45	269	· · ·
NGC6822	25.34	-18.40	7.74	6.74	9.49E+20	0.49[MM]	IB(s)m	10.0	1.6e+08	0.00085	156	· · ·
NGC6861	350.88	-32.21	1.41	0.91	4.97E+20	28.05[SBF]	SA(s)0-	-3.0	2.1e+10	0.3	164	· · ·
NGC6868	350.92	-32.64	1.77	1.41	4.94E+20	35.5[T88]	E2	-5.0	4.9e+10	0.26	163	· · ·
NGC6870	351.03	-32.67	1.32	0.62	4.92E+20	35.5[T88]	SAB(r)ab	1.7	1.8e+10	0.33	163	· · ·
NGC6946	95.72	11.67	5.74	4.89	2.11E+21	5.5[T88]	SAB(rs)cd	6.0	3.6e+10	0.74	20	HII
NGC7013	75.13	-11.14	1.99	0.71	1.69E+21	14.2[T88]	SA(r)0/a	.0	1.6e+10	0.17	254	LINER
NGC7049	350.37	-44.06	2.13	1.47	2.74E+20	29.92[SBF]	SA(s)0o	-2.0	3.3e+10	0.21	283	· · ·
NGC7090	341.30	-45.38	3.71	0.63	2.76E+20	6.6[T92]	SBc	5.0	5.3e+09	0.12	62	· · ·
NGC7172	15.13	-53.06	1.23	0.69	1.65E+20	33.9[T88]	Sa	1.4	1.7e+10	2.9	112	Sy2
NGC7173	14.96	-53.08	0.59	0.44	1.64E+20	31.33[SBF]	E+	-4.1	1.3e+10	<0.0093	112	· · ·
NGC7174	14.93	-53.09	1.17	0.60	1.64E+20	35.5[T88]	Sab	1.8	1.0e+10	<0.032	112	· · ·
NGC7320	93.27	-21.01	1.12	0.57	7.96E+20	13.8[T92]	SA(s)d	7.0	2.8e+09	<0.0044	171	HII
NGC7331	93.73	-20.72	5.24	1.86	8.61E+20	14.52[KP]	SA(s)b	3.0	5.8e+10	2.2	151	LINER
IC1459	4.67	-64.11	2.62	1.90	1.18E+20	29.24[SBF]	E3	-5.0	6.1e+10	0.18	99	LINER
IC5267	350.24	-61.80	2.62	1.94	1.58E+20	21.0[T88]	SA(s)0/a	0.0	2.1e+10	0.17	106	· · ·
NGC7424	354.80	-62.75	4.77	4.06	1.31E+20	11.5[T88]	SAB(rs)cd	6.0	9.4e+09	0.071	65	· · ·
NGC7457	96.22	-26.94	2.13	1.14	5.56E+20	13.24[SBF]	SA(rs)0-	-3.0	5.3e+09	0.0087	211	· · ·
PGC70285	88.05	-39.26	0.71	0.14	6.07E+20	27.0[NED]	Im	10.0	· · ·	<0.0026	238	· · ·
NGC7463	88.04	-39.35	1.44	0.34	6.04E+20	33.5[T88]	SABb	3.0	1.8e+10	<0.02	238	· · ·
NGC7465	88.07	-39.39	0.62	0.40	6.03E+20	27.2[T88]	SB(s)0o	-1.5	6.7e+09	1.3	238	Sy2
IC1473	98.17	-28.36	1.02	0.52	5.97E+20	11.2[NED]	S0	-2.0	7.6e+08	0.033	261	· · ·
NGC7537	82.76	-50.66	1.12	0.29	5.26E+20	35.3[T88]	SAbc	4.0	1.6e+10	<0.015	131	· · ·
NGC7541	82.84	-50.65	1.73	0.61	5.27E+20	33.4[T88]	SB(rs)bc	4.0	4.1e+10	10.5	131	HII
NGC7582	348.08	-65.70	2.51	1.05	1.93E+20	17.6[T88]	SB(s)ab	2.0	2.2e+10	6.8	80	Sy2
NGC7640	105.24	-18.94	5.24	1.00	1.04E+21	7.0[T92]	SB(s)c	5.0	6.8e+09	0.037	293	· · ·
IC5332	359.39	-71.37	3.88	3.08	1.36E+20	8.4[T88]	SA(s)d	7.0	4.7e+09	0.026	47	· · ·
NGC7714	88.22	-55.57	0.95	0.70	4.86E+20	36.9[T88]	SB(s)b	3.0	1.9e+10	6.7	100	HII LINER
NGC7715	88.27	-55.58	1.29	0.25	4.86E+20	36.3[T88]	Im	10.0	5.4e+09	<0.015	100	· · ·
PGC71926	87.04	-57.23	1.51	1.02	3.83E+20	35.1[T88]	SAB(s)m	9.0	4.5e+09	<0.067	208	· · ·
NGC7727	70.94	-67.61	2.34	1.78	2.76E+20	23.3[T88]	SAB(s)a	1.0	2.6e+10	<0.081	174	· · ·

Table 1—Continued

galaxy	GLON[a] (deg)	GLAT[b] (deg)	R25[c] (′)	r25[d] (′)	nH[e] (cm^{-2})	Distance[f] (Mpc)	Morphol.[g] Type	Hubble[h] T	L_B[i] ($L_\odot$)	$f_\nu(60\mu m)$[j] (Jy)	Group No.	Notes[k]
NGC7741	104.51	-34.37	2.18	1.47	4.68E+20	12.6[T92]	SB(s)cd	6.0	6.6e+09	0.16	258	···
NGC7743	96.97	-49.53	1.51	1.29	5.25E+20	20.70[SBF]	SB(s)0+	-1.0	9.0e+09	0.15	179	Sy2
NGC7793	4.52	-77.17	4.67	3.16	1.15E+20	3.7[T92]	SA(s)d	7.0	3.8e+09	0.055	117	HII
PGC10133	145.13	-19.22	0.17	0.09	7.04E+20	9.3[NED]	unknown	···	···	···	197	···
NGC1097A	226.81	-64.71	0.41	0.23	1.85E+20	18.2[NED]	E	-5.0	7.9e+08	<0.0011	84	···
NGC1190	199.22	-57.33	0.46	0.15	4.23E+20	34.9[NED]	S0o	-2.0	1.8e+09	<0.003	147	···
NGC1331	212.24	-54.33	0.47	0.43	2.23E+20	17.7[T88]	E2	-5.0	9.9e+08	<0.0023	55	···
NGC4121	130.24	51.39	0.48	0.42	1.84E+20	25.5[T88]	E	-5.0	1.8e+09	<0.0047	97	···
NGC4264	281.91	67.41	0.49	0.40	1.55E+20	33.8[NED]	SB(rs)0+	-1.0	5.2e+09	<0.0082	143	···
PGC40512	267.86	79.20	0.17	0.14	2.52E+20	10.3[NED]	E	···	···	<9.1e-05	126	···
PGC41185	286.86	70.12	0.10	0.10	1.65E+20	10.8[NED]	E	···	6.5e+07	<4.2e-05	40	···
IC3437	284.84	73.48	0.45	0.18	2.24E+20	22.9[NED]	E	···	6.1e+08	<0.0015	284	···
IC3665	294.21	74.20	0.46	0.29	2.17E+20	16.4[NED]	Im	10.0	4.0e+08	<0.0013	162	···
NGC5046	311.37	46.15	0.42	0.37	4.91E+20	29.5[NED]	E	-5.0	···	<0.0047	166	···
PGC55478	23.81	50.32	0.46	0.14	3.30E+20	22.6[NED]	SBdm	8.0	···	<0.0012	82	···
PGC66526	350.43	-43.94	0.43	0.26	2.80E+20	29.2[NED]	Sa	1.0	4.4e+09	<0.0035	283	···
NGC7464	88.04	-39.36	0.39	0.38	6.04E+20	26.1[T88]	E1	-5.0	2.6e+09	0.74	238	···

[a]Galactic longitude of the galaxy.

[b]Galactic latitude of the galaxy.

[c]The semi-major axis of the D_{25} isophotal ellipsis.

[d]The semi-minor axis of the D_{25} isophotal ellipsis.

[e]The Galactic HI column density, taken from the dust map by Dickey & Lockman (1990).

[f]Enclosed in brackets are the references for the distances, with KP for the Key Project (Freedman et al. 2002), SBF for the surface brightness fluctuation method (Tonry et al. 2001), T92 for the nearby galaxy flow model by Tully (1992), T88 for the Nearby Galaxy Catalog (Tully 1988). Distances computed from recessional velocities taken from the NED service (RC3) are labeled as NED(V3K).

[g]The morphological type is taken from RC3. In the type code S stands for spiral, E for elliptical, S0 for lenticular, I for irregular; (r) for inner ring, (s) for S-shaped, (rs) for mixed; B for barred, A for non-barred, AB for mixed; Im for Magellanic irregular, I0 for non-Magellanic irregular; the trailing -/o/+ for early/intermediate/late stage; etc. The detailed explanations can be found in the RC3 catalog (p. 15, Vol. I).

[h]The Hubble type T of galaxies is taken from RC3.

[i]The blue luminosity calculated from the apparent blue magnitude taken from RC3. The luminosity is expressed in unit of solar luminosity assuming a absolute blue magnitude of 5.47 for the Sun.

[j]The flux density at 60μm taken from the IRAS point source catalog (IPAC, 1986), with some nearby galaxies from Rice et al. (1988). When the galaxy is below detection, the 3σ upper limit is calculated by adopting noise levels of 8.5 mJy/arcmin^2 for 60 μm (Rice et al. 1988).

[k]Whether the galaxy is a HII/starburst/LINER/Seyfert galaxy, as extracted from the NED classification.

Table 2. Groups of surveyed galaxies and ACIS observations

Group No.	galaxies	Number of Obs	Exposure Total (sec)	ObsID	Observation Date	OBSMJD	Exposure (sec)	Chips used	Number of sources
1	NGC598	28	1572990	787	2000-01-11	51554.024	9657	6 7	5
				1730	2000-07-12	51737.354	50063	0 1 2 3	73
				786	2000-08-30	51786.010	46854	6 7	46
				2023	2001-07-06	52096.963	89942	0 1 2 3	116
				6378	2005-09-21	53634.011	111647	0 1 2 3	124
				6380	2005-09-23	53636.839	90515	0 1 2 3	122
				7170	2005-09-26	53639.275	41487	0 1 2 3	87
				7171	2005-09-29	53642.191	38175	0 1 2 3	76
				6384	2005-10-01	53644.921	22451	0 1 2 3	57
				6386	2005-10-31	53674.388	15049	0 1 2 3	38
				7196	2005-11-02	53676.331	23049	0 1 2 3	57
				7197	2005-11-03	53677.078	12812	0 1 2 3	35
				7198	2005-11-05	53679.333	22047	0 1 2 3	49
				7199	2005-11-06	53680.090	15011	0 1 2 3	33
				7208	2005-11-21	53695.995	11654	0 1 2 3	46
				6382	2005-11-23	53697.543	73247	0 1 2 3	115
				7226	2005-11-26	53700.202	25171	0 1 2 3	64
				6376	2006-03-03	53797.886	94265	0 1 2 3	130
				6388	2006-06-09	53895.957	98940	0 1 2 3	121
				6383	2006-06-15	53901.266	99107	0 1 2 3	137
				6387	2006-06-26	53912.075	78268	0 1 2 3	136
				7344	2006-07-01	53917.079	21724	0 1 2 3	72
				6379	2006-09-04	53982.935	54255	0 1 2 3	95
				7402	2006-09-07	53985.603	45161	0 1 2 3	86
				6381	2006-09-12	53990.388	100169	0 1 2 3	105
				6385	2006-09-18	53996.165	91148	0 1 2 3	128
				6377	2006-09-25	54003.738	94073	0 1 2 3	120
				6389	2006-11-28	54067.546	97049	0 1 2 3	138
2	NGC5457	26	1078280	934	2000-03-26	51629.015	99504	6 7	142
	NGC5477			2779	2002-10-31	52578.728	14460	6 7	28
				4731	2004-01-19	53023.248	56963	6 7	81
				5296	2004-01-21	53025.444	3231	6 7	13
				5297	2004-01-24	53028.065	21964	6 7	46
				5300	2004-03-07	53071.395	52761	6 7	84
				5309	2004-03-14	53078.070	71679	6 7	99
				4732	2004-03-19	53083.344	70691	6 7	99
				5322	2004-05-03	53128.323	65529	6 7	91
				4733	2004-05-07	53132.562	25132	6 7	49
				5323	2004-05-09	53134.133	43161	6 7	66
				5337	2004-07-05	53191.780	10070	6 7	28
				5338	2004-07-06	53192.561	28934	6 7	67
				5339	2004-07-07	53193.558	14505	6 7	38
				5340	2004-07-08	53194.464	55116	6 7	86
				4734	2004-07-11	53197.072	35932	6 7	66
				6114	2004-09-05	53253.767	67052	6 7	81

Table 2—Continued

Group No.	galaxies	Number of Obs	Exposure Total (sec)	ObsID	Observation Date	OBSMJD	Exposure (sec)	Chips used	Number of sources
				6115	2004-09-08	53256.762	36217	6 7	69
				6118	2004-09-11	53259.636	11606	6 7	34
				4735	2004-09-12	53260.541	29148	6 7	57
				4736	2004-11-01	53310.780	78342	6 7	95
				6152	2004-11-07	53316.283	44656	6 7	60
				6170	2004-12-22	53361.054	48563	6 7	57
				6175	2004-12-24	53363.693	41177	6 7	61
				6169	2004-12-30	53369.091	29753	6 7	50
				4737	2005-01-01	53371.605	22134	6 7	38
3	PGC3589	21	127341	4698	2004-04-26	53121.357	6137	6 7	19
				4699	2004-05-07	53132.195	6355	6 7	17
				4700	2004-05-17	53142.436	6182	6 7	14
				4701	2004-05-30	53155.929	6147	6 7	14
				4702	2004-06-12	53168.598	5958	6 7	19
				4703	2004-06-27	53183.840	5955	6 7	11
				4704	2004-07-12	53198.048	5990	6 7	13
				4705	2004-07-24	53210.328	5907	6 7	16
				4706	2004-08-04	53221.465	6153	6 7	16
				4707	2004-08-17	53234.204	5958	6 7	17
				4708	2004-08-31	53248.241	5955	6 7	16
				4709	2004-09-16	53264.159	6169	6 7	16
				4710	2004-10-01	53279.453	5958	6 7	16
				4711	2004-10-11	53289.607	5955	6 7	16
				4712	2004-10-24	53302.065	6159	6 7	15
				4713	2004-11-05	53314.104	6150	6 7	14
				4714	2004-11-20	53329.784	6121	6 7	21
				4715	2004-12-05	53344.279	5753	6 7	14
				4716	2004-12-19	53358.367	6092	6 7	16
				4717	2004-12-29	53368.992	6150	6 7	22
				4718	2005-01-10	53380.173	6137	6 7	21
4	NGC3031	19	241344	390	2000-03-21	51624.030	2409	6 7	24
	PGC28757			735	2000-05-07	51671.231	50560	6 7	121
				4751	2004-02-07	53042.455	5077	6 7	7
				4752	2004-03-25	53089.419	5151	6 7	8
				5935	2005-05-26	53516.158	11119	6 7	66
				5936	2005-05-28	53518.830	11551	6 7	61
				5937	2005-06-01	53522.356	12159	6 7	64
				5938	2005-06-03	53524.951	11958	6 7	66
				5939	2005-06-06	53527.637	11958	6 7	65
				5940	2005-06-09	53530.288	12127	6 7	68
				5941	2005-06-11	53532.891	11958	6 7	64
				5942	2005-06-15	53536.062	12105	6 7	67
				5943	2005-06-18	53539.482	12166	6 7	65
				5944	2005-06-21	53542.223	11958	6 7	64
				5945	2005-06-24	53545.254	11724	6 7	57

Table 2—Continued

Group No.	galaxies	Number of Obs	Exposure Total (sec)	ObsID	Observation Date	OBSMJD	Exposure (sec)	Chips used	Number of sources
				5946	2005-06-26	53547.905	12172	6 7	66
				5947	2005-06-29	53550.566	10835	6 7	61
				5948	2005-07-03	53554.066	12182	6 7	65
				5949	2005-07-06	53557.327	12175	6 7	66
5	NGC5204	13	120019	2028	2001-01-09	51918.956	10145	6 7	6
				2029	2001-05-02	52031.795	9547	6 7	4
				3933	2003-08-06	52857.249	48937	6 7	11
				3934	2003-08-09	52860.400	5015	6 7	5
				3935	2003-08-11	52862.799	4764	6 7	3
				3936	2003-08-14	52865.691	4829	6 7	1
				3937	2003-08-17	52868.326	4906	6 7	1
				3938	2003-08-19	52870.978	5450	6 7	3
				3939	2003-08-27	52878.721	5443	6 7	6
				3940	2003-09-05	52887.675	5125	6 7	4
				3941	2003-09-14	52896.487	5163	6 7	2
				3942	2003-09-23	52905.398	5512	6 7	3
				3943	2003-10-03	52915.980	5183	6 7	3
6	NGC1399	11	430758	320	1999-10-18	51469.567	3510	0 1 2 3	21
	NGC1389			624	1999-12-15	51527.005	44166	6 7	68
	NGC1396			319	2000-01-18	51561.355	56659	6 7	182
	NGC1404			239	2000-01-19	51562.028	3644	0 1 2 3	28
	PGC13449			2942	2003-02-13	52683.001	29619	6 7	52
	PGC13452			4169	2003-05-21	52780.505	45886	0 1 2 3	85
				4171	2003-05-23	52782.618	45545	0 1 2 3	63
				4172	2003-05-26	52785.291	45092	0 1 2 3	165
				4174	2003-05-28	52787.924	46273	0 1 2 3	148
				4175	2003-05-29	52788.480	63728	0 1 2 3	61
				4176	2003-05-31	52790.553	46636	0 1 2 3	108
7	NGC5128	10	737657	316	1999-12-05	51517.901	36182	0 1 2 3	148
				962	2000-05-17	51681.957	36972	0 1 2 3	161
				2978	2002-09-03	52520.114	45182	6 7	129
				3965	2003-09-14	52896.573	50173	6 7	139
				7797	2007-03-22	54181.376	98170	0 1 2 3	256
				7798	2007-03-27	54186.413	92042	0 1 2 3	215
				7799	2007-03-30	54189.107	96037	0 1 2 3	216
				7800	2007-04-17	54207.626	92045	0 1 2 3	263
				8489	2007-05-08	54228.780	95179	0 1 2 3	248
				8490	2007-05-30	54250.094	95675	0 1 2 3	263
8	NGC3034	9	238482	361	1999-09-20	51441.474	33680	0 1 2 3	88
				1302	1999-09-20	51441.883	15708	0 1 2 3	68
				378	1999-12-30	51542.078	4169	0 1 2 3	26
				379	2000-03-11	51614.832	9046	0 1 2 3	46
				380	2000-05-07	51671.839	5065	0 1 2 3	30
				2933	2002-06-18	52443.784	18255	6 7	47
				6097	2005-02-04	53405.982	58188	7	11

Table 2—Continued

Group No.	galaxies	Number of Obs	Exposure Total (sec)	ObsID	Observation Date	OBSMJD	Exposure (sec)	Chips used	Number of sources
				5644	2005-08-17	53599.038	75131	7	14
				6361	2005-08-18	53600.664	19240	7	34
9	NGC4278	7	478398	398	2000-04-20	51654.614	1544	6 7	5
	NGC4283			4741	2005-02-03	53404.501	37942	6 7	104
	NGC4286			7077	2006-03-16	53810.591	111718	6 7	169
				7078	2006-07-25	53941.422	52092	6 7	102
				7079	2006-10-24	54032.671	106419	6 7	143
				7081	2007-02-20	54151.670	112143	6 7	156
				7080	2007-04-20	54210.529	56540	6 7	115
10	NGC4038	7	425177	315	1999-12-01	51513.227	73171	6 7	93
	NGC4039			3040	2001-12-29	52272.660	69932	6 7	75
				3043	2002-04-18	52382.606	67961	6 7	90
				3042	2002-05-31	52425.460	68140	6 7	86
				3044	2002-07-10	52465.029	36963	6 7	62
				3718	2002-07-13	52468.614	35164	6 7	70
				3041	2002-11-22	52600.592	73846	6 7	75
11	NGC4696	7	296801	504	2000-05-22	51686.023	32121	6 7	31
				505	2000-06-08	51703.036	10083	6 7	16
				4190	2003-04-18	52747.544	34719	6 7	25
				4191	2003-04-18	52747.960	34471	6 7	21
				4954	2004-04-01	53096.584	90195	6 7	42
				4955	2004-04-02	53097.645	45254	6 7	30
				5310	2004-04-04	53099.181	49958	6 7	33
12	NGC821	7	229737	4408	2002-11-26	52604.704	25275	7	12
				4006	2002-12-01	52609.055	13684	7	12
				5692	2004-12-04	53343.933	27955	6 7	38
				6314	2005-06-20	53541.449	40129	6 7	41
				6310	2005-06-21	53542.386	32438	6 7	32
				6313	2005-06-22	53543.516	50133	6 7	51
				5691	2005-06-23	53544.760	40123	6 7	37
13	NGC1637	7	214923	763	1999-11-01	51483.927	29654	6 7	21
				764	1999-11-13	51495.693	26557	6 7	21
				765	1999-12-16	51528.704	35772	6 7	54
				766	2000-02-07	51581.474	38944	6 7	34
				1968	2000-10-30	51847.056	26758	6 7	40
				1969	2001-03-06	51974.153	27072	6 7	39
				1970	2001-07-22	52112.849	30166	6 7	31
14	NGC1365	7	105373	3554	2002-12-24	52632.623	14796	6 7	41
				6871	2006-04-10	53835.293	13862	6 7	18
				6872	2006-04-12	53837.522	15164	6 7	21
				6873	2006-04-14	53839.977	15182	6 7	23
				6868	2006-04-17	53842.795	15151	6 7	22
				6869	2006-04-20	53845.417	16124	6 7	26
				6870	2006-04-23	53848.420	15094	6 7	28
15	NGC1313	7	70598	2950	2002-10-13	52560.838	20156	6 7	35

Table 2—Continued

Group No.	galaxies	Number of Obs	Exposure Total (sec)	ObsID	Observation Date	OBSMJD	Exposure (sec)	Chips used	Number of sources
				3550	2002-11-09	52587.802	14758	0 1 2 3	54
				3551	2003-10-02	52914.408	15017	0 1 2 3	41
				4747	2003-11-17	52960.252	5405	6 7	9
				4748	2004-02-22	53057.113	5166	6 7	13
				4750	2004-02-22	53057.184	4759	6 7	4
				4749	2004-03-10	53074.203	5337	6 7	5
16	NGC3384	6	351397	1587	2001-02-13	51953.064	31923	6 7	76
	NGC3379			4692	2004-10-19	53297.790	10034	6 7	22
				7073	2006-01-23	53758.244	85177	6 7	103
				7074	2006-04-09	53834.441	69951	6 7	89
				7075	2006-07-03	53919.461	84175	6 7	104
				7076	2007-01-10	54110.077	70137	6 7	89
17	NGC4365	6	198371	2015	2001-06-02	52062.939	40953	6 7	135
	NGC4370			5921	2005-04-28	53488.662	40033	6 7	130
				5922	2005-05-09	53499.042	40036	6 7	109
				5923	2005-06-14	53535.578	40089	6 7	110
				5924	2005-11-25	53699.485	27124	6 7	96
				7224	2005-11-26	53700.033	10136	6 7	41
18	NGC2146	6	58801	3131	2002-08-30	52516.236	9395	6 7	26
				3132	2002-09-20	52537.462	9644	6 7	31
				3133	2002-10-09	52556.226	9958	6 7	26
				3134	2002-10-27	52574.141	9699	6 7	36
				3135	2002-11-16	52594.660	10147	6 7	35
				3136	2002-12-05	52613.520	9958	6 7	31
19	NGC2403	5	224010	2014	2001-04-17	52016.179	36051	6 7	51
				4627	2004-08-09	53226.292	45123	7	9
				4628	2004-08-23	53240.414	47119	6 7	66
				4629	2004-10-03	53281.675	45142	6 7	67
				4630	2004-12-22	53361.634	50575	6 7	63
20	NGC6946	5	174787	1043	2001-09-07	52159.027	59036	6 7	93
				4404	2002-11-25	52603.360	30335	6 7	75
				4631	2004-10-22	53300.231	30121	6 7	55
				4632	2004-11-06	53315.033	28339	6 7	59
				4633	2004-12-03	53342.533	26956	6 7	60
21	NGC720	5	140641	492	2000-10-12	51829.878	40124	6 7	86
				7372	2006-08-06	53953.378	50034	6 7	93
				7062	2006-10-09	54017.873	23160	6 7	65
				8449	2006-10-12	54020.013	19161	6 7	63
				8448	2006-10-12	54020.937	8162	6 7	35
22	NGC3877	5	121579	767	2000-01-10	51553.766	19158	6 7	45
				768	2000-03-07	51610.807	23753	6 7	45
				952	2000-08-01	51757.286	20025	6 7	50
				1971	2001-01-14	51923.811	29552	6 7	52
				1972	2001-10-17	52199.127	29091	6 7	49
23	NGC4395	5	112443	402	2000-04-17	51651.417	1260	6 7	8

Table 2—Continued

Group No.	galaxies	Number of Obs	Exposure Total (sec)	ObsID	Observation Date	OBSMJD	Exposure (sec)	Chips used	Number of sources
				882	2000-06-20	51715.128	17187	7	17
				5301	2004-04-10	53105.113	29730	7	3
				5302	2004-04-11	53106.045	31121	7	2
				5014	2004-08-07	53224.672	33145	0 1 2 3	70
24	NGC5194	5	92872	414	2000-01-23	51566.259	1152	6 7	12
	NGC5195			353	2000-03-21	51624.717	905	7	4
				354	2000-06-20	51715.336	15056	6 7	79
				1622	2001-06-23	52083.783	27152	6 7	98
				3932	2003-08-07	52858.605	48607	6 7	110
25	NGC4636	4	212589	324	1999-12-04	51516.992	8503	0 1 2 3	41
				323	2000-01-26	51569.389	53049	6 7	135
				3926	2003-02-14	52684.229	75689	0 1 2 3	193
				4415	2003-02-15	52685.122	75348	0 1 2 3	192
26	NGC253	4	144008	969	1999-12-16	51528.508	14166	6 7	66
				790	1999-12-27	51539.097	44080	6 7	76
				383	2000-08-16	51772.284	2156	6 7	31
				3931	2003-09-19	52901.536	83606	6 7	117
27	NGC4374	4	118677	401	2000-04-20	51654.672	1709	6 7	10
				803	2000-05-19	51683.334	28841	6 7	83
				5908	2005-05-01	53491.167	46675	6 7	83
				6131	2005-11-07	53681.476	41452	6 7	86
28	NGC1550	4	110057	3186	2002-01-08	52282.733	10115	0 1 2 3	20
				3187	2002-01-08	52282.862	9774	0 1 2 3	25
				5800	2005-10-22	53665.629	45132	6 7	36
				5801	2005-10-24	53667.763	45036	6 7	34
29	NGC3628	4	105496	395	1999-11-03	51485.309	1776	6 7	11
				2039	2000-12-02	51880.263	58704	6 7	71
				2918	2002-04-06	52370.281	22252	6 7	24
				2919	2002-07-04	52459.957	22764	6 7	29
30	NGC628	4	104269	2057	2001-06-19	52079.794	46947	6 7	70
				2058	2001-10-19	52201.173	46761	6 7	74
				4753	2003-11-20	52963.176	5403	6 7	12
				4754	2003-12-29	53002.547	5158	6 7	7
31	PGC50779	4	34645	355	2000-01-16	51559.430	1335	6 7	11
				365	2000-03-14	51617.252	5484	7	12
				356	2000-03-14	51617.325	23372	6 7	54
				2454	2001-05-02	52031.669	4454	6 7	20
32	NGC5253	3	193967	2032	2001-01-13	51922.943	57353	6 7	55
				7153	2005-12-12	53716.348	69123	6 7	59
				7154	2006-05-20	53875.156	67491	6 7	54
33	NGC3351	3	119973	5929	2005-02-08	53409.195	39958	6 7	41
				5930	2005-05-08	53498.561	39955	6 7	45
				5931	2005-07-01	53552.216	40060	6 7	47
34	IC10	3	117158	3953	2003-03-12	52710.507	29896	6 7	33
				7082	2006-11-02	54041.510	43135	6 7	46

Table 2—Continued

Group No.	galaxies	Number of Obs	Exposure Total (sec)	ObsID	Observation Date	OBSMJD	Exposure (sec)	Chips used	Number of sources
				8458	2006-11-04	54043.982	44127	6 7	51
35	NGC4490	3	98871	1579	2000-11-03	51851.059	19772	6 7	50
	NGC4485			4725	2004-07-29	53215.864	38959	6 7	64
				4726	2004-11-20	53329.272	40140	6 7	59
36	NGC4214	3	83278	2030	2001-10-16	52198.800	26761	6 7	39
				4743	2004-04-03	53098.193	27558	6 7	38
				5197	2004-07-30	53216.333	28959	6 7	28
37	IC342	3	78938	2916	2002-04-29	52393.613	9883	6 7	3
				2917	2002-08-26	52512.436	10512	6 7	2
				7069	2006-11-12	54051.601	58543	6 7	56
38	NGC45	3	65927	6184	2005-01-12	53382.603	24956	6 7	19
				6185	2005-01-13	53383.903	6092	6 7	8
				4690	2005-01-16	53386.209	34879	6 7	21
39	NGC1068	3	61212	343	1999-12-09	51521.861	517	7	1
				344	2000-02-21	51595.659	48054	6 7	77
				370	2000-02-22	51596.244	12641	7	17
40	NGC4472	3	55747	322	2000-03-19	51622.511	10496	0 1 2 3	67
	NGC4467			321	2000-06-12	51707.076	40096	6 7	167
	NGC4470			8107	2007-04-28	54218.760	5155	6 7	13
	PGC41185								
	PGC41258								
41	NGC4258	3	43079	350	2000-04-17	51651.453	14224	6 7	65
				1618	2001-05-28	52057.890	21209	6 7	74
				2340	2001-05-29	52058.151	7646	7	8
42	NGC4151	3	36159	347	1999-12-04	51516.470	1247	7	3
				372	2000-03-06	51609.561	6864	7	10
				348	2000-03-07	51610.453	28048	6 7	57
43	NGC4314	3	34480	399	2000-07-07	51732.174	1952	6 7	5
				2062	2001-04-02	52001.814	16279	6 7	27
				2063	2001-06-22	52082.825	16249	6 7	39
44	NGC4559	3	23832	2026	2001-01-14	51923.684	9725	6 7	10
				2027	2001-06-04	52064.052	11106	6 7	11
				2686	2002-03-14	52347.218	3001	6 7	17
45	NGC891	2	171961	794	2000-11-01	51849.775	51558	6 7	65
				4613	2003-12-10	52983.379	120403	6 7	104
46	NGC2681	2	161938	2060	2001-01-30	51939.026	81932	6 7	69
				2061	2001-05-02	52031.923	80006	6 7	79
47	IC5332	2	108767	2066	2001-05-02	52031.035	52812	6 7	64
				2067	2001-07-10	52100.966	55955	6 7	65
48	NGC1569	2	108153	782	2000-04-11	51645.004	98000	7	45
				4745	2004-01-10	53014.988	10153	6 7	22
49	PGC14617	2	92306	3870	2003-03-24	52722.494	51119	6 7	46
				3871	2003-06-22	52812.293	41187	6 7	31
50	NGC1387	2	91418	4168	2003-05-20	52779.956	46236	0 1 2 3	106
	NGC1381			4170	2003-05-24	52783.157	45182	0 1 2 3	79

Table 2—Continued

Group No.	galaxies	Number of Obs	Exposure Total (sec)	ObsID	Observation Date	OBSMJD	Exposure (sec)	Chips used	Number of sources
	NGC1382								
	PGC13343								
51	NGC4013	2	85074	4013	2003-03-16	52714.715	4959	6 7	13
				4739	2004-02-03	53038.397	80115	6 7	70
52	NGC3683	2	78977	4659	2004-04-07	53102.260	40172	6 7	61
				4660	2004-06-06	53162.716	38805	6 7	50
53	NGC1291	2	76671	795	2000-06-27	51722.917	39670	6 7	83
				2059	2000-11-07	51855.228	37001	6 7	73
54	NGC278	2	76495	2055	2001-06-22	52082.353	38748	6 7	61
				2056	2001-10-18	52200.716	37747	6 7	57
55	NGC1332	2	75775	2915	2002-09-18	52535.122	18515	6 7	34
	NGC1331			4372	2002-09-19	52536.444	57260	6 7	108
	PGC12827								
56	NGC55	2	69807	2255	2001-09-11	52163.267	60118	0 1 2 3	156
				4744	2004-06-29	53185.075	9689	0 1 2 3	39
57	NGC3184	2	66697	804	2000-01-08	51551.036	42662	6 7	75
				1520	2000-02-03	51577.446	24035	6 7	56
58	IC2560	2	65627	1592	2000-10-29	51846.918	9952	6 7	21
				4908	2004-02-16	53051.846	55675	6 7	32
59	NGC4565	2	62853	404	2000-06-30	51725.130	2892	6 7	13
				3950	2003-02-08	52678.799	59961	6 7	89
60	NGC1052	2	62353	385	2000-08-29	51785.966	2395	6 7	6
				5910	2005-09-18	53631.411	59958	6 7	84
61	NGC5236	2	61603	793	2000-04-29	51663.580	51632	6 7	139
				2064	2001-09-04	52156.999	9971	6 7	50
62	NGC7090	2	57432	7060	2005-12-18	53722.228	26412	6 7	43
				7252	2006-04-10	53835.853	31020	6 7	45
63	NGC3256	2	55727	835	2000-01-05	51548.064	28148	6 7	38
				3569	2003-05-23	52782.143	27579	6 7	58
64	NGC4736	2	52227	808	2000-05-13	51677.133	49795	7	48
				410	2000-06-24	51719.583	2432	6 7	10
65	NGC7424	2	47922	3495	2002-05-21	52415.983	23734	6 7	38
				3496	2002-06-11	52436.252	24188	6 7	38
66	NGC4406	2	47881	318	2000-04-07	51641.318	14819	6 7	28
	NGC4387			5912	2005-03-09	53438.238	33062	0 1 2 3	55
67	NGC4569	2	41359	405	2000-02-17	51591.101	1712	6 7	11
	IC3583			5911	2005-11-13	53687.731	39647	6 7	53
68	NGC4136	2	38712	2920	2002-03-07	52340.703	18751	6 7	29
				2921	2002-06-08	52433.908	19961	6 7	21
69	NGC4579	2	38588	406	2000-02-23	51597.996	2945	7	1
				807	2000-05-02	51666.685	35643	7	27
70	NGC5866	2	36658	1624	2002-01-10	52284.738	2478	7	1
				2879	2002-11-14	52592.109	34180	6 7	74
71	NGC2787	2	32405	388	2000-01-07	51550.996	1164	6 7	4
				4689	2004-05-18	53143.076	31241	6 7	43

Table 2—Continued

Group No.	galaxies	Number of Obs	Exposure Total (sec)	ObsID	Observation Date	OBSMJD	Exposure (sec)	Chips used	Number of sources
72	NGC5055	2	30803	413	2000-04-15	51649.128	2448	6 7	23
	PGC46093			2197	2001-08-27	52148.093	28355	6 7	83
73	NGC2841	2	30351	389	1999-12-20	51532.476	1772	6 7	8
				6096	2004-12-18	53357.206	28579	6 7	64
74	NGC4494	2	26934	403	1999-12-20	51532.522	1779	6 7	9
				2079	2001-08-05	52126.417	25155	6 7	41
75	NGC4725	2	26735	409	1999-12-20	51532.561	1776	6 7	11
				2976	2002-12-02	52610.660	24959	6 7	53
76	NGC404	2	25925	870	1999-12-19	51531.884	24169	6 7	43
				384	2000-08-30	51786.568	1756	6 7	8
77	NGC4501	2	22761	3324	2002-07-21	52476.852	4662	6 7	10
				2922	2002-12-09	52617.039	18099	6 7	51
78	NGC1058	2	22147	387	2000-03-20	51623.701	2438	6 7	3
				9579	2007-08-29	54341.066	19709	0 1 2 3	52
79	NGC4594	2	20699	407	1999-12-20	51532.600	1947	7	10
				1586	2001-05-31	52060.165	18752	6 7	136
80	NGC7582	2	19564	436	2000-10-14	51831.713	13619	6 7	25
				2319	2000-10-15	51832.558	5945	6 7	14
81	NGC6503	2	15400	872	2000-03-23	51626.322	13359	6 7	26
				1640	2000-10-27	51844.994	2041	6 7	8
82	NGC5953	2	14914	2930	2002-06-11	52436.009	10159	6 7	14
	NGC5954			4023	2002-12-29	52637.521	4755	6 7	10
	PGC55478								
83	PGC48179	2	14360	6321	2005-07-04	53555.487	7180	6 7	14
				6322	2005-07-04	53555.574	7180	6 7	16
84	NGC1097	2	11740	2339	2001-01-28	51937.496	6332	7	11
	NGC1097A			1611	2001-01-28	51937.577	5408	6 7	33
85	NGC5506	2	9738	357	2000-06-02	51697.741	785	7	1
	NGC5507			358	2000-08-14	51770.303	8953	6 7	17
86	NGC3458	2	9516	1691	2001-07-06	52096.108	4758	0 1 2 3	16
				1692	2001-07-06	52096.172	4758	0 1 2 3	12
87	NGC4309	2	8700	7122	2006-11-13	54052.649	3353	6 7	9
				8105	2007-11-12	54416.688	5347	6 7	15
88	NGC660	2	7068	1633	2001-01-28	51937.065	1939	6 7	4
				4010	2003-02-12	52682.922	5129	6 7	11
89	NGC3368	2	6367	2260	2000-11-04	51852.935	4355	0 1 2 3	16
				391	2000-11-20	51868.191	2012	6 7	11
90	NGC1055	2	6249	386	2000-01-29	51572.185	1152	6 7	4
				4011	2003-02-26	52696.499	5097	6 7	10
91	NGC4419	2	6028	4016	2003-11-22	52965.032	902	6 7	2
				5283	2004-01-30	53034.158	5126	6 7	9
92	NGC672	2	3926	1634	2001-02-07	51947.236	1744	6 7	3
	IC1727			7090	2006-09-30	54008.074	2182	6 7	3
93	NGC3631	1	90207	3951	2003-07-05	52825.035	90207	6 7	107
94	NGC5879	1	90124	2241	2001-06-10	52070.987	90124	6 7	77

Table 2—Continued

Group No.	galaxies	Number of Obs	Exposure Total (sec)	ObsID	Observation Date	OBSMJD	Exposure (sec)	Chips used	Number of sources
95	NGC4217	1	73660	4738	2004-02-19	53054.266	73660	6 7	57
96	NGC1427A	1	66327	3949	2003-10-21	52933.818	66327	6 7	42
97	NGC4125 NGC4121	1	65084	2071	2001-09-09	52161.293	65084	6 7	84
98	NGC625	1	61125	4746	2004-03-20	53084.583	61125	7	28
99	IC1459	1	60166	2196	2001-08-12	52133.984	60166	6 7	74
100	NGC7715 NGC7714	1	60148	4800	2004-01-24	53028.858	60148	6 7	50
101	NGC3556	1	60124	2025	2001-09-08	52160.581	60124	6 7	80
102	NGC4631 NGC4627	1	59974	797	2000-04-16	51650.705	59974	6 7	54
103	NGC5775 NGC5774	1	58959	2940	2002-04-05	52369.571	58959	6 7	90
104	NGC3898	1	58175	4740	2005-02-10	53411.850	58175	6 7	63
105	NGC1705	1	57673	3930	2003-09-12	52894.203	57673	6 7	51
106	IC5267	1	55673	3947	2003-08-13	52864.979	55673	6 7	66
107	NGC4552	1	55139	2072	2001-04-22	52021.459	55139	6 7	154
108	NGC3077	1	54141	2076	2001-03-07	51975.785	54141	7	34
109	NGC1427	1	51695	4742	2005-05-01	53491.832	51695	6 7	78
110	NGC2110	1	50439	883	2000-04-22	51656.541	50439	7	6
111	NGC2992 NGC2993	1	50179	3956	2003-02-16	52686.735	50179	6 7	45
112	NGC7172 NGC7173 NGC7174	1	50166	905	2000-07-02	51727.320	50166	0 1 2 3	128
113	NGC520	1	49961	2924	2003-01-29	52668.195	49961	6 7	48
114	IC1613	1	49955	5905	2005-09-04	53617.992	49955	6 7	45
115	NGC4244	1	49846	942	2000-05-20	51684.533	49846	6 7	46
116	NGC4945	1	49750	864	2000-01-27	51570.792	49750	6 7	38
117	NGC7793	1	49564	3954	2003-09-06	52888.972	49564	6 7	52
118	NGC1407 IC343	1	49196	791	2000-08-16	51772.332	49196	6 7	170
119	NGC5813	1	49038	5907	2005-04-02	53462.282	49038	6 7	82
120	NGC3310	1	48231	2939	2003-01-25	52664.015	48231	6 7	42
121	NGC2434	1	47305	2923	2002-10-24	52571.808	47305	6 7	43
122	NGC1800 PGC16744	1	46742	4062	2003-05-10	52769.914	46742	6 7	46
123	NGC2300 NGC2276	1	46171	4968	2004-06-23	53179.847	46171	6 7	64
124	NGC4526	1	44106	3925	2003-11-14	52957.268	44106	6 7	79
125	NGC1808	1	43427	3012	2002-12-19	52627.306	43427	6 7	71
126	NGC4382 PGC40512	1	40256	2016	2001-05-29	52058.607	40256	6 7	96
127	NGC1672	1	40156	5932	2006-04-30	53855.546	40156	6 7	59
128	NGC3377	1	40150	2934	2003-01-06	52645.349	40150	6 7	51

Table 2—Continued

Group No.	galaxies	Number of Obs	Exposure Total (sec)	ObsID	Observation Date	OBSMJD	Exposure (sec)	Chips used	Number of sources
129	NGC4697	1	39763	784	2000-01-15	51558.689	39763	6 7	98
130	NGC3507	1	39756	3149	2002-03-08	52341.155	39756	6 7	52
131	NGC7541 NGC7537	1	39475	7070	2006-10-30	54038.687	39475	6 7	51
132	NGC4457	1	39382	3150	2002-12-03	52611.502	39382	6 7	67
133	NGC3607 NGC3605 NGC3608	1	39004	2073	2001-06-12	52072.050	39004	0 1 2 3	134
134	IC3259 IC3256 IC3260	1	38751	4687	2005-02-11	53412.544	38751	6 7	47
135	NGC4649 NGC4647	1	38604	785	2000-04-20	51654.149	38604	6 7	205
136	NGC4321	1	38351	6727	2006-02-18	53784.728	38351	6 7	75
137	NGC3557 NGC3564 NGC3568	1	37990	3217	2002-11-28	52606.209	37990	0 1 2 3	109
138	NGC3115	1	37452	2040	2001-06-14	52074.439	37452	6 7	91
139	NGC5347	1	37407	4867	2004-06-05	53161.474	37407	6 7	32
140	NGC5746	1	37289	3929	2003-04-11	52740.588	37289	0 1 2 3	119
141	PGC40372	1	36137	5913	2005-03-19	53448.278	36137	0 1 2 3	55
142	NGC3585	1	35753	2078	2001-06-03	52063.436	35753	6 7	73
143	NGC4261 NGC4257 NGC4264	1	35184	834	2000-05-06	51670.107	35184	6 7	63
144	NGC5102	1	34661	2949	2002-05-21	52415.365	34661	6 7	48
145	NGC1553	1	34166	783	2000-01-02	51545.744	34166	6 7	69
146	NGC5170	1	33455	3928	2003-05-18	52777.519	33455	0 1 2 3	88
147	NGC1199 NGC1189 NGC1190	1	32171	8172	2006-11-23	54062.866	32171	6 7	39
148	NGC4698	1	30401	3008	2002-06-16	52441.627	30401	6 7	28
149	NGC1316 NGC1317	1	30233	2022	2001-04-17	52016.622	30233	6 7	93
150	PGC20551	1	30159	4866	2003-12-26	52999.250	30159	6 7	57
151	NGC7331	1	30131	2198	2001-01-27	51936.696	30131	6 7	66
152	NGC2782	1	29961	3014	2002-05-17	52411.701	29961	6 7	53
153	NGC4473	1	29958	4688	2005-02-26	53427.889	29958	6 7	61
154	NGC2865	1	29878	2020	2001-03-17	51985.950	29878	6 7	48
155	NGC1482 NGC1481	1	28556	2932	2002-02-05	52310.082	28556	6 7	27
156	NGC6822	1	28485	2925	2002-11-04	52582.520	28485	0 1 2 3	62
157	NGC4303	1	28377	2149	2001-08-07	52128.921	28377	6 7	58
158	NGC4449	1	26937	2031	2001-02-04	51944.744	26937	6 7	49
159	NGC3079	1	26918	2038	2001-03-07	51975.325	26918	6 7	64

Table 2—Continued

Group No.	galaxies	Number of Obs	Exposure Total (sec)	ObsID	Observation Date	OBSMJD	Exposure (sec)	Chips used	Number of sources
	NGC3073								
160	NGC4438 NGC4435	1	25404	2883	2002-01-29	52303.725	25404	6 7	48
161	NGC4651	1	25398	2096	2001-06-02	52062.633	25398	6 7	24
162	NGC4621 IC3665	1	25155	2068	2001-08-01	52122.081	25155	6 7	75
163	NGC6868 NGC6870	1	23770	3191	2002-11-01	52579.586	23770	0 1 2 3	63
164	NGC6861	1	23113	3190	2002-07-26	52481.739	23113	0 1 2 3	65
165	NGC3923	1	21379	1563	2001-06-14	52074.893	21379	6 7	59
166	NGC5044 NGC5046	1	20726	798	2000-03-19	51622.655	20726	6 7	29
167	NGC4388	1	20230	1619	2001-06-08	52068.188	20230	6 7	28
168	NGC3190 NGC3185	1	20064	2760	2002-03-14	52347.274	20064	6 7	40
169	PGC24175	1	20016	2075	2001-03-23	51991.203	20016	7	24
170	NGC3955	1	19958	2955	2002-06-15	52440.778	19958	6 7	33
171	NGC7320	1	19955	789	2000-07-09	51734.732	19955	6 7	35
172	NGC1386	1	19887	4076	2003-11-19	52962.848	19887	6 7	32
173	NGC3396 NGC3395	1	19734	2042	2001-04-28	52027.118	19734	6 7	39
174	NGC7727	1	19254	2045	2001-12-18	52261.093	19254	6 7	40
175	NGC5832	1	18684	3105	2002-01-28	52302.002	18684	7	1
176	NGC4564	1	18349	4008	2003-11-21	52964.811	18349	7	14
177	NGC3665	1	18190	3222	2001-11-03	52216.552	18190	0 1 2 3	52
178	NGC6278	1	16682	6789	2005-11-18	53692.431	16682	7	3
179	NGC7743	1	15187	6790	2006-11-07	54046.362	15187	7	3
180	NGC4589	1	15185	6785	2006-08-31	53978.834	15185	7	8
181	NGC4026	1	15184	6782	2006-05-31	53886.304	15184	7	7
182	NGC5322	1	15179	6787	2006-08-20	53967.827	15179	7	4
183	NGC3945	1	15171	6780	2006-04-16	53841.203	15171	7	3
184	NGC524	1	15144	6778	2006-08-29	53976.145	15144	7	4
185	NGC474	1	15134	7144	2006-07-06	53922.245	15134	6 7	27
186	NGC4036	1	15130	6783	2006-07-24	53940.701	15130	7	8
187	NGC3414	1	15111	6779	2006-06-25	53911.869	15111	7	6
188	NGC4111	1	15101	1578	2001-04-03	52002.025	15101	6 7	21
189	NGC4233	1	15075	6784	2006-07-04	53920.757	15075	7	2
190	NGC5838	1	15042	6788	2006-06-14	53900.492	15042	7	6
191	NGC3998	1	15003	6781	2006-07-01	53917.355	15003	7	8
192	NGC1371	1	14998	7277	2006-02-19	53785.449	14998	6 7	31
193	NGC5198	1	14968	6786	2006-07-10	53926.026	14968	7	5
194	NGC4234	1	12220	4184	2003-07-28	52848.375	12220	0 1 2 3	24
195	NGC4691	1	10785	4061	2003-03-08	52706.546	10785	7	9
196	PGC35286	1	10631	871	2000-01-07	51550.709	10631	6 7	6
197	NGC1023	1	10372	4696	2004-02-27	53062.768	10372	6 7	30

Table 2—Continued

Group No.	galaxies	Number of Obs	Exposure Total (sec)	ObsID	Observation Date	OBSMJD	Exposure (sec)	Chips used	Number of sources
	NGC1023A PGC10133								
198	IC2574	1	10166	792	2000-01-07	51550.855	10166	6 7	21
199	NGC1493	1	10156	7145	2006-06-17	53903.113	10156	6 7	28
200	NGC3982	1	10148	4845	2004-01-03	53007.310	10148	7	5
201	NGC3412	1	10090	4693	2005-02-06	53407.397	10090	6 7	19
202	NGC3521	1	10074	4694	2004-03-11	53075.429	10074	6 7	44
203	NGC4459	1	9961	2927	2002-06-02	52427.568	9961	6 7	20
204	NGC2798 NGC2799	1	9961	8457	2006-11-04	54043.256	9961	6 7	22
205	NGC3245A NGC3245	1	9756	2926	2002-01-29	52303.586	9756	6 7	22
206	NGC5426 NGC5427	1	9740	4847	2004-03-26	53090.250	9740	7	10
207	NGC4596	1	9331	2928	2002-07-14	52469.041	9331	6 7	27
208	PGC71926	1	9312	3248	2002-07-08	52463.448	9312	0 1 2 3	30
209	NGC4701	1	9155	7148	2006-04-25	53850.980	9155	6 7	22
210	NGC3640 NGC3641	1	9154	7142	2006-01-29	53764.330	9154	6 7	19
211	NGC7457	1	9107	4697	2003-11-18	52961.714	9107	6 7	20
212	NGC3078	1	8179	5902	2005-02-02	53403.937	8179	0 1 2 3	35
213	NGC2552	1	7951	7146	2006-06-04	53890.361	7951	6 7	18
214	NGC5643	1	7943	5636	2004-12-26	53365.280	7943	6 7	12
215	NGC4531	1	6793	2107	2001-08-07	52128.817	6793	6 7	16
216	NGC5068	1	6755	7149	2006-03-17	53811.909	6755	6 7	8
217	NGC4138	1	6130	3994	2003-03-16	52714.957	6130	7	2
218	NGC4762	1	5858	3998	2003-05-17	52776.791	5858	7	4
219	NGC1073	1	5811	4686	2004-02-09	53044.345	5811	6 7	21
220	NGC3718	1	5415	3993	2003-02-08	52678.076	5415	7	4
221	NGC5585	1	5382	7150	2006-08-28	53975.233	5382	6 7	15
222	IC3019	1	5353	8072	2007-04-13	54203.090	5353	6 7	6
223	NGC4623	1	5350	8062	2007-05-11	54231.369	5350	6 7	14
224	IC3773	1	5350	8070	2007-04-28	54218.197	5350	6 7	12
225	PGC23324	1	5336	1564	2001-11-02	52215.269	5336	6 7	4
226	NGC988	1	5334	3552	2003-08-03	52854.123	5334	6 7	13
227	NGC4216	1	5273	3996	2004-08-05	53222.264	5273	7	8
228	NGC3125	1	5219	4012	2003-02-16	52686.011	5219	6 7	9
229	NGC4772	1	5194	3999	2003-02-14	52684.079	5194	7	2
230	NGC3065 NGC3066	1	5171	7054	2006-06-13	53899.083	5171	6 7	11
231	NGC4612	1	5158	8051	2007-04-16	54206.047	5158	6 7	18
232	NGC4578	1	5158	8048	2007-04-28	54218.829	5158	6 7	15
233	NGC4570	1	5158	8041	2007-04-28	54218.969	5158	6 7	16
234	NGC4464	1	5158	8127	2007-04-28	54218.344	5158	6 7	11
235	IC3647	1	5155	8130	2007-04-28	54218.273	5155	6 7	7

Table 2—Continued

Group No.	galaxies	Number of Obs	Exposure Total (sec)	ObsID	Observation Date	OBSMJD	Exposure (sec)	Chips used	Number of sources
236	NGC4168	1	5136	3995	2003-07-31	52851.680	5136	7	4
237	NGC1012	1	5119	7133	2005-11-25	53699.853	5119	6 7	8
238	NGC7463 NGC7464 NGC7465 PGC70285	1	5059	4025	2003-07-29	52849.592	5059	6 7	6
239	NGC4754	1	5036	8038	2007-02-19	54150.800	5036	6 7	14
240	NGC4750	1	4995	4020	2003-08-27	52878.646	4995	6 7	18
241	NGC3610	1	4990	7141	2006-06-03	53889.109	4990	6 7	8
242	NGC4102	1	4966	4014	2003-04-30	52759.810	4966	6 7	15
243	NGC5005	1	4963	4021	2003-08-19	52870.900	4963	6 7	17
244	NGC4713	1	4963	4019	2003-01-28	52667.035	4963	6 7	12
245	NGC4654	1	4959	3325	2002-05-03	52397.209	4959	6 7	16
246	NGC4527	1	4959	4017	2003-03-09	52707.966	4959	6 7	19
247	NGC4340 NGC4350	1	4959	4015	2004-02-28	53063.725	4959	6 7	13
248	IC396	1	4931	7134	2005-11-29	53703.307	4931	6 7	7
249	PGC44014	1	4793	7132	2005-11-29	53703.689	4793	6 7	9
250	NGC5678	1	4793	4022	2003-07-28	52848.659	4793	6 7	12
251	NGC3445	1	4755	1686	2001-07-05	52095.789	4755	0 1 2 3	12
252	NGC4343	1	4703	7129	2006-07-16	53932.849	4703	6 7	4
253	NGC5350 NGC5353 NGC5354 NGC5355 NGC5358	1	4550	5903	2005-04-10	53470.860	4550	0 1 2 3	17
254	NGC7013	1	4435	7130	2006-01-29	53764.822	4435	6 7	9
255	NGC3495	1	4108	7126	2006-07-09	53925.959	4108	6 7	9
256	NGC14	1	4076	7127	2006-05-14	53869.758	4076	6 7	10
257	NGC4450	1	3697	3997	2003-04-30	52759.936	3697	7	3
258	NGC7741	1	3587	7124	2006-02-08	53774.429	3587	6 7	6
259	NGC6690	1	3519	7123	2006-05-23	53878.548	3519	6 7	10
260	NGC4561	1	3510	7125	2006-03-15	53809.122	3510	6 7	13
261	IC1473	1	3366	7121	2006-10-09	54017.091	3366	6 7	4
262	NGC1036	1	3183	7119	2005-12-06	53710.883	3183	6 7	8
263	NGC4385	1	3180	6877	2006-06-25	53911.529	3180	7	1
264	NGC5949	1	3049	7120	2006-06-11	53897.813	3049	6 7	10
265	NGC4548	1	3027	1620	2001-03-24	51992.119	3027	7	2
266	NGC5033	1	2968	412	2000-04-28	51662.596	2968	6 7	9
267	NGC1507	1	2828	7115	2006-07-30	53946.962	2828	6 7	10
268	NGC4143	1	2772	1617	2001-03-26	51994.884	2772	7	2
269	PGC63552	1	2771	7118	2006-05-28	53883.498	2771	6 7	6
270	NGC4760	1	2749	5894	2005-03-02	53431.254	2749	0 1 2 3	15
271	NGC949	1	2732	7113	2005-12-04	53708.117	2732	6 7	3
272	NGC1003	1	2703	7116	2005-11-23	53697.373	2703	6 7	6

Table 2—Continued

Group No.	galaxies	Number of Obs	Exposure Total (sec)	ObsID	Observation Date	OBSMJD	Exposure (sec)	Chips used	Number of sources
	PGC10025								
273	NGC4670	1	2665	7117	2006-03-05	53799.220	2665	6 7	7
274	NGC3600	1	2604	7114	2006-01-25	53760.301	2604	6 7	5
275	NGC2500	1	2601	7112	2005-12-18	53722.026	2601	6 7	9
276	NGC2986	1	2473	5901	2005-01-29	53399.539	2473	6 7	14
277	NGC3227	1	2456	1616	2001-03-23	51991.457	2456	7	3
	NGC3226								
278	NGC4310	1	2444	7109	2006-04-08	53833.524	2444	6 7	9
279	NGC925	1	2271	7104	2005-11-23	53697.329	2271	6 7	10
280	NGC4245	1	2214	7107	2006-04-05	53830.906	2214	6 7	7
281	NGC4062	1	2211	7106	2006-03-05	53799.177	2211	6 7	5
282	NGC959	1	2204	7111	2005-12-04	53708.163	2204	6 7	6
283	NGC7049	1	2176	5895	2005-07-09	53560.736	2176	0 1 2 3	5
	PGC66526								
284	NGC4491	1	2175	7089	2006-07-28	53944.385	2175	6 7	4
	IC3437								
285	NGC3169	1	2153	1614	2001-05-02	52031.748	2153	7	3
286	NGC6500	1	2131	416	2000-08-01	51757.238	2131	6 7	5
287	NGC4550	1	2078	1621	2001-03-24	51992.163	2078	7	3
288	NGC4448	1	2015	7110	2006-04-08	53833.567	2015	6 7	6
289	NGC4204	1	2009	7092	2006-04-02	53827.592	2009	6 7	6
290	NGC4312	1	1961	7083	2005-11-07	53681.438	1961	6 7	7
291	NGC1156	1	1955	7088	2006-10-03	54011.476	1955	6 7	4
292	NGC2541	1	1952	1635	2000-10-26	51843.139	1952	6 7	4
293	NGC7640	1	1951	7101	2006-05-09	53864.699	1951	6 7	4
294	NGC3593	1	1951	7084	2006-06-29	53915.178	1951	6 7	1
295	NGC3432	1	1951	7091	2006-06-25	53911.420	1951	6 7	3
296	NGC3239	1	1951	7094	2006-05-21	53876.755	1951	6 7	11
297	NGC2337	1	1951	7096	2006-10-22	54030.064	1951	6 7	3
298	NGC4274	1	1929	7108	2006-04-05	53830.946	1929	6 7	7
299	NGC4826	1	1824	411	2000-03-27	51630.699	1824	6 7	9
300	NGC3486	1	1779	393	1999-11-03	51485.270	1779	6 7	4
301	NGC4203	1	1776	397	1999-11-04	51486.521	1776	6 7	8
302	NGC3627	1	1776	394	1999-11-03	51485.381	1776	6 7	12
303	NGC3489	1	1776	392	1999-11-03	51485.346	1776	6 7	5
304	NGC3675	1	1772	396	1999-11-03	51485.230	1772	6 7	4
305	NGC4414	1	1760	1639	2000-10-29	51846.712	1760	6 7	11
306	NGC4150	1	1760	1638	2000-10-29	51846.746	1760	6 7	10
307	NGC2683	1	1760	1636	2000-10-26	51843.308	1760	6 7	8
308	NGC4625	1	1759	7098	2006-02-08	53774.775	1759	6 7	5
309	NGC4020	1	1759	7093	2006-04-08	53833.602	1759	6 7	1
310	NGC855	1	1756	7095	2006-10-03	54011.517	1756	6 7	2
311	NGC5474	1	1756	7086	2006-09-10	53988.417	1756	6 7	10
312	NGC3985	1	1756	7099	2006-02-08	53774.811	1756	6 7	7
313	NGC3623	1	1756	1637	2000-11-03	51851.310	1756	6 7	8

Table 2—Continued

Group No.	galaxies	Number of Obs	Exposure Total (sec)	ObsID	Observation Date	OBSMJD	Exposure (sec)	Chips used	Number of sources
314	NGC3413	1	1756	7102	2006-06-25	53911.461	1756	6 7	2
315	NGC3344	1	1756	7087	2006-01-25	53760.350	1756	6 7	6
316	NGC5273	1	1753	415	2000-09-03	51790.700	1753	6 7	4
317	NGC4207	1	1753	7100	2006-07-28	53944.426	1753	6 7	2
318	NGC4096	1	1753	7103	2006-02-18	53784.689	1753	6 7	6
319	NGC3274	1	1753	7085	2006-02-08	53774.730	1753	6 7	4
320	NGC4639	1	1463	408	2000-02-05	51579.607	1463	6 7	4

Table 3. X-ray Point sources in nearby galaxies

Group No.	CXOJ[a]	Pos. Err.[b]	source Name[c]	α[d] ($\prime$)	r_{25}[e]	Dis.[f] (Mpc)	V/D[g]	L_{Xmax}[h] (erg/s)	F_{Xavg}[i] (cgs)	F/F[j]	σ_{max}[k]	C_{max}[l]	SQH[m]	Var/KS[n]	Notes[o]
5	CXOJ132927.545+582534.18	1.28	NGC5204-X2	1.264	0.81	4.3	4/4	3.2e+38	8.95e-14	6.55	29.777	79.048	h4		
5	CXOJ132935.609+582408.68	1	NGC5204-X9	0.928	0.37	4.3	1/1	1.11e+37	5.01e-15	1	3.155	6.575	d1		
5	CXOJ132935.863+582626.48	1.58	NGC5204-X10	1.376	0.56	4.3	7/1	9.76e+36	4.40e-15	2.54	5.668	23.666	h1		
5	CXOJ132936.449+582313.74	1	NGC5204-X11	1.838	0.74	4.3	2/1	7.52e+36	3.39e-15	1.58	6.803	15.219	h1		
5	CXOJ132938.405+582342.36	1	NGC5204-X12	1.386	0.59	4.3	4/1	6.88e+36	3.10e-15	4.06	6.112	17.362	h1		
5	CXOJ132938.618+582505.59	1	NGC5204-X1	0.291	0.19	4.3	13/13	9.81e+39	2.51e-12	4.54	640.539	9903.551	q2 h11	v/1	1ULX
5	CXOJ132939.252+582531.08	1	NGC5204-X4	0.585	0.29	4.3	13/4	4.26e+37	1.22e-14	14.12	19.976	100.501	d3 h1	v/1	
5	CXOJ132940.219+582453.96	1	NGC5204-X3	0.527	0.34	4.3	13/6	6.39e+37	1.71e-14	14.92	14.946	34.106	q1 d3 h2		*B0Ibp
5	CXOJ132941.568+582125.45	1	NGC5204-X7	3.705	1.57	4.3	1/1	1.6e+37	7.20e-15	1	14.245	41.176	h1		
5	CXOJ132942.694+582515.17	1	NGC5204-X6	0.844	0.54	4.3	12/1	2.15e+37	9.70e-15	53.3	5.744	11.682	h1		
5	CXOJ132945.245+581745.10	1.02	-	-	-	4.3	1/1	5.08e+36	2.29e-15	1	4.328	9.385	h1		+v
5	CXOJ132945.523+583010.30	1.29	-	-	-	4.3	1/1	1.56e+37	7.03e-15	1	2.825	5.708	d1		pm* +v
5	CXOJ132946.920+582316.80	1	NGC5204-X8	2.256	1.21	4.3	6/1	1.46e+37	6.58e-15	3.66	1.960	3.835	d1		
5	CXOJ132950.357+581401.86	2.49	-	-	-	4.3	1/1	5.08e+36	2.29e-15	1	3.209	8.759	d1	v/1	
5	CXOJ132950.957+581747.47	1	-	-	-	4.3	2/2	4.64e+37	1.60e-14	1.88	30.145	85.391	d1 h1		pm* +v
5	CXOJ132950.962+583321.78	3.29	-	-	-	4.3	1/1	3.91e+37	1.76e-14	1	5.484	14.839	h1		+v
5	CXOJ132951.403+581853.64	1	-	-	-	4.3	3/1	6.5e+36	2.93e-15	1.03	5.322	10.721	h1		+v
5	CXOJ132952.428+581513.61	1.68	-	-	-	4.3	1/1	1.12e+37	5.06e-15	1	6.570	19.735	h1		
5	CXOJ132954.425+582406.34	1	NGC5204-X5	2.549	1.64	4.3	3/1	2.22e+37	9.99e-15	2.52	2.771	5.662	d1		+v
5	CXOJ132955.066+582151.59	1	-	-	-	4.3	2/1	5.21e+37	2.35e-14	13.82	6.154	12.639	h1		+v
5	CXOJ132955.783+583440.91	4.84	-	-	-	4.3	1/1	6.01e+37	2.71e-14	1	5.029	22.153	h1		+v
5	CXOJ132956.203+582220.78	1	-	-	-	4.3	2/2	7.39e+37	3.32e-14	1	9.542	19.632	h2		+v
5	CXOJ132958.030+581538.34	1.66	-	-	-	4.3	2/1	3.04e+37	1.37e-14	1	2.274	4.654	d1		q pm* +rv
5	CXOJ132959.153+582008.84	1	-	-	-	4.3	3/2	2.51e+37	1.00e-14	5.95	3.501	6.840	d2		+v
5	CXOJ133001.097+581610.09	1.48	-	-	-	4.3	2/1	3.79e+37	1.71e-14	3.14	2.945	5.806	d1		pm* +iv
5	CXOJ133025.814+581558.90	2.38	-	-	-	4.3	1/1	4.64e+37	2.09e-14	1	3.588	7.538	d1		pm* +v

[a] source names composed from their positions following CXO naming conventions.

[b] source positional uncertainties in arcsec computed from the scheme of Kim et al. (2004).

[c] galactic source names numbered sequentially by its maximum detection significance.

[d] galactic source nuclear separation in arcminutes.

[e] galactic source nuclear separation in unit of the elliptical radius.

[f] distance in Mpc for the source.

[g] numbers the source was observed/detected.

[h] maximum luminosity in erg s^{-1} computed from detections.

[i] average flux in erg s^{-1} cm^{-2} computed from detections.

[j] F_{max}/F_{min} ratio as an extreme variability indicator.

[k] the maximum detection significance.

[l] the maximum photon counts from detections.

[m] statistics for supersoft/quasisoft/hard/dim phases. For example, s2 means supersoft in two observations, q3 means quasisoft in three observations, h4 means hard in four observations, and d1 means too dim (below 10 counts) in one observations.

[n] statistics for variability within single observations by the K-S criterion. For example, v/3 means the source was variable by the K-S criterion (i.e., $P_{KS} < 0.01$) in three observations.

[o]source identification. ULX: ultraluminous X-ray sources, ULS: ultraluminous supersoft sources, (NGC3031): the galactic nucleus for NGC1313.

Table 4. Individual observations of X-ray sources

Group No.	CXOJ[a]	individual[b] detection	Expos.[c] (sec)	OBSMJD[d]	OAA[e] ($''$)	VigF[f]	St. PosErr[g] ($''$,$''$)	PosErr[h] ($''$)	σ[i]	Counts[j]	C_{MS}[k]	C_{HM}[l]	F_X[m] (cgs)	P_{KS}[n]	SQH[o]
5	CXOJ132927.545+582534.18	3940.s3.4 (1)	5125	52887.675	343	0.938	0.83,0.26	1.6	5.466	12.2(3.6)	0.11(0.74)	-0.15(0.77)	2.20e-14	0.17	hard
		3941.s3.m0 (1)	5163	52896.487	348	0.938	-,-	1.3	29.777	79.0(9.9)	0.13(0.21)	-0.31(0.23)	1.44e-13	0.43	hard
		3942.s3.3 (1)	5512	52905.398	350	0.936	0.35,0.14	1.5	14.584	49.9(7.4)	0.10(0.25)	-0.22(0.27)	9.29e-14	0.0017	hard
		3943.s3.3 (1)	5183	52915.980	351	0.936	0.35,0.14	1.5	17.322	51.0(7.3)	0.22(0.23)	-0.29(0.23)	9.93e-14	0.21	hard
5	CXOJ132935.609+582408.68	2028.s3.3 (1)	10145	51918.956	96	0.992	0.15,0.22	1	3.155	6.6(2.6)	-0.67(0.67)	-0.04(0.98)	5.01e-15	0.084	dim
5	CXOJ132935.863+582626.48	3933.s3.6 (1)	48937	52857.249	343	0.939	0.45,0.26	1.6	5.668	23.7(5.7)	0.63(0.47)	-0.15(0.46)	4.40e-15	0.49	hard
		3934.s3.u	5015	52860.400	344	0.938	-,-	-	-1.03	4.8(4.7)	-	-	8.93e-15	-	-
		3935.s3.u	4764	52862.799	343	0.938	-,-	-	-0.98	4.4(4.5)	-	-	8.98e-15	-	-
		3936.s3.u	4829	52865.691	343	0.937	-,-	-	-1.25	5.8(4.6)	-	-	1.18e-14	-	-
		3937.s3.u	4906	52868.326	344	0.937	-,-	-	-1.36	6.1(4.5)	-	-	1.22e-14	-	-
		3938.s3.u	5450	52870.978	344	0.937	-,-	-	-0.33	1.0(3.0)	-	-	1.73e-15	-	-
		3939.s3.u	5443	52878.721	340	0.939	-,-	-	-0.33	1.0(3.0)	-	-	1.88e-15	-	-
5	CXOJ132936.449+582313.74	2028.s3.u	10145	51918.956	146	0.776	-,-	-	-0.68	2.2(3.2)	-	-	2.14e-15	-	-
		3933.s3.5 (1)	48937	52857.249	154	0.784	0.27,0.11	1	6.803	15.2(4.0)	0.58(0.59)	-0.06(0.57)	3.39e-15	0.61	hard
5	CXOJ132938.405+582342.36	2028.s3.u	10145	51918.956	115	0.989	-,-	-	-0.33	1.0(3.0)	-	-	7.64e-16	-	-
		3933.s3.4 (1)	48937	52857.249	176	0.977	0.31,0.13	1	6.112	17.4(4.5)	0.00(1.00)	1.00(0.14)	3.10e-15	0.71	hard
		3934.s3.u	5015	52860.400	179	0.978	-,-	-	-0.42	1.0(2.4)	-	-	1.79e-15	-	-
		3935.s3.u	4764	52862.799	178	0.977	-,-	-	-0.64	1.9(3.0)	-	-	3.72e-15	-	-
5	CXOJ132938.618+582505.59	2028.s3.2 (1)	10145	51918.956	34	0.998	0.01,0.01	1.1	640.539	4466.1(67.1)	-0.04(0.02)	-0.46(0.03)	3.38e-12	0.1	hard
		2029.s3.3 (1)	9547	52031.795	32	0.999	0.02,0.01	1	363.386	1577.6(39.9)	-0.23(0.04)	-0.64(0.04)	1.31e-12	0.74	hard
		3933.s3.2 (1)	48937	52857.249	258	0.962	0.02,0.01	1	570.934	9903.6(100.8)	-0.11(0.02)	-0.60(0.02)	1.80e-12	1.7e-62	hard
		3934.s3.1 (1)	5015	52860.400	259	0.963	0.08,0.03	1	120.555	551.0(23.7)	-0.34(0.06)	-0.73(0.08)	1.00e-12	0.04	QSS
		3935.s3.1 (1)	4764	52862.799	258	0.963	0.09,0.03	1	127.661	624.6(25.3)	-0.16(0.06)	-0.67(0.07)	1.24e-12	0.058	hard
		3936.s3.1 (1)	4829	52865.691	259	0.962	0.05,0.02	1	295.932	2233.9(47.7)	-0.03(0.03)	-0.58(0.03)	4.42e-12	0.84	hard
		3937.s3.1 (1)	4906	52868.326	259	0.962	0.05,0.02	1	294.875	2182.8(47.1)	-0.05(0.03)	-0.54(0.04)	4.23e-12	0.4	hard
		3938.s3.1 (1)	5450	52870.978	259	0.962	0.09,0.03	1	128.799	579.5(24.3)	-0.28(0.06)	-0.68(0.08)	9.73e-13	0.42	hard
		3939.s3.3 (1)	5443	52878.721	259	0.962	0.08,0.03	1	137.562	601.4(24.7)	-0.33(0.06)	-0.81(0.07)	1.10e-12	0.2	QSS
		3940.s3.2 (1)	5125	52887.675	259	0.962	0.06,0.02	1	233.995	1456.5(38.5)	-0.06(0.04)	-0.53(0.04)	2.56e-12	0.5	hard
		3941.s3.1 (1)	5163	52896.487	259	0.962	0.04,0.02	1	305.240	2331.7(48.7)	0.02(0.03)	-0.53(0.03)	4.13e-12	0.00032	hard
		3942.s3.1 (1)	5512	52905.398	259	0.962	0.06,0.02	1	209.829	1390.1(37.7)	-0.09(0.04)	-0.54(0.05)	2.52e-12	0.3	hard
		3943.s3.1 (1)	5183	52915.980	259	0.963	0.04,0.02	1	264.661	2069.3(46.0)	-0.00(0.04)	-0.55(0.04)	3.92e-12	0.85	hard
5	CXOJ132939.252+582531.08	2028.s3.u	10145	51918.956	13	0.996	-,-	-	-0.56	1.8(3.2)	-	-	1.36e-15	-	-
		2029.s3.4 (1)	9547	52031.795	50	0.998	0.59,0.22	1	3.412	7.4(2.8)	-0.68(0.66)	0.00(1.00)	6.12e-15	0.97	dim
		3933.s3.3 (1)	48937	52857.249	283	0.916	0.24,0.10	1	19.976	100.5(10.8)	-0.30(0.17)	-0.58(0.26)	1.92e-14	0.0033	hard
		3934.s3.3 (1)	5015	52860.400	282	0.920	0.38,0.27	1.3	2.673	5.6(2.5)	0.27(0.86)	-0.56(0.72)	1.06e-14	0.27	dim
		3935.s3.2 (1)	4764	52862.799	282	0.920	0.66,0.32	1.3	2.671	6.1(2.6)	-0.71(0.59)	-1.00(0.50)	1.27e-14	0.42	dim
		3936.s3.u	4829	52865.691	281	0.921	-,-	-	-1.12	4.5(4.0)	-	-	9.28e-15	-	-
		3937.s3.u	4906	52868.326	282	0.918	-,-	-	-1.48	5.9(4.0)	-	-	1.20e-14	-	-
		3938.s3.u	5450	52870.978	280	0.920	-,-	-	-1.67	7.2(4.3)	-	-	1.27e-14	-	-
		3939.s3.u	5443	52878.721	277	0.908	-,-	-	-1.22	4.9(4.0)	-	-	9.53e-15	-	-
		3940.s3.u	5125	52887.675	274	0.893	-,-	-	-0.37	1.0(2.7)	-	-	1.89e-15	-	-
		3941.s3.u	5163	52896.487	272	0.951	-,-	-	-0.40	1.2(3.0)	-	-	2.15e-15	-	-
		3942.s3.u	5512	52905.398	268	0.959	-,-	-	-0.46	1.5(3.2)	-	-	2.73e-15	-	-
		3943.s3.u	5183	52915.980	261	0.961	-,-	-	-0.37	1.0(2.7)	-	-	1.90e-15	-	-
5	CXOJ132940.219+582453.96	2028.s3.1 (1)	10145	51918.956	40	0.998	0.21,0.12	1	7.053	16.1(4.1)	-0.07(0.58)	-0.19(0.68)	1.22e-14	0.59	hard
		2029.s3.2 (1)	9547	52031.795	43	0.997	0.11,0.07	1	14.946	34.1(5.9)	-0.49(0.29)	-0.78(0.45)	2.83e-14	0.76	QSS
		3933.s3.u	48937	52857.249	244	0.966	-,-	-	-1.68	13.4(8.0)	-	-	2.42e-15	-	-
		3934.s3.2 (1)	5015	52860.400	244	0.967	0.20,0.27	1.1	2.411	4.8(2.2)	-0.64(0.68)	-1.00(0.50)	8.64e-15	0.077	dim
		3935.s3.u	4764	52862.799	244	0.966	-,-	-	-1.62	7.0(4.3)	-	-	1.39e-14	-	-
		3936.s3.u	4829	52865.691	243	0.967	-,-	-	-1.82	8.4(4.6)	-	-	1.65e-14	-	-

Table 4—Continued

Group No.	CXOJ[a]	individual[b] detection	Expos.[c] (sec)	OBSMJD[d]	OAA[e] ($''$)	VigF[f]	St. PosErr[g] ($''$,$''$)	PosErr[h] ($''$)	σ[i]	Counts[j]	C_{MS}[k]	C_{HM}[l]	F_X[m] (cgs)	P_{KS}[n]	SQH[o]
		3937.s3.u	4906	52868.326	243	0.967	-,-	-	-0.33	1.0(3.0)	-	-	1.93e-15	-	-
		3938.s3.3 (1)	5450	52870.978	242	0.967	0.37,0.18	1.1	4.147	8.6(3.0)	-0.25(0.78)	-1.00(0.50)	1.44e-14	0.86	dim
		3939.s3.5 (1)	5443	52878.721	243	0.967	0.59,0.10	1.1	2.798	5.7(2.5)	-0.01(0.99)	-1.00(0.50)	1.04e-14	0.42	dim
		3940.s3.u	5125	52887.675	241	0.968	-,-	-	-2.04	9.7(4.7)	-	-	1.70e-14	-	-
		3941.s3.u	5163	52896.487	242	0.968	-,-	-	-0.68	2.6(3.8)	-	-	4.58e-15	-	-
		3942.s3.u	5512	52905.398	241	0.968	-,-	-	-0.33	1.4(4.2)	-	-	2.52e-15	-	-
		3943.s3.2 (1)	5183	52915.980	243	0.967	0.24,0.20	1.1	6.860	15.3(4.0)	-0.67(0.45)	0.19(0.91)	2.88e-14	0.38	hard
5	CXOJ132941.568+582125.45	3933.s3.1 (1)	48937	52857.249	37	0.998	0.13,0.08	1	14.245	41.2(6.6)	0.14(0.32)	-0.40(0.34)	7.20e-15	0.54	hard
5	CXOJ132942.694+582515.17	2028.s3.u	10145	51918.956	23	0.930	-,-	-	-0.37	1.0(2.7)	-	-	8.12e-16	-	-
		2029.s3.1 (1)	9547	52031.795	66	0.996	0.13,0.13	1	5.744	11.7(3.5)	0.50(0.66)	-0.35(0.71)	9.70e-15	0.48	hard
		3933.s3.u	48937	52857.249	264	0.960	-,-	-	-0.33	1.0(3.1)	-	-	1.82e-16	-	-
		3934.s3.u	5015	52860.400	261	0.961	-,-	-	-0.43	1.0(2.3)	-	-	1.82e-15	-	-
		3935.s3.u	4764	52862.799	260	0.961	-,-	-	-0.53	1.0(1.9)	-	-	1.99e-15	-	-
		3937.s3.u	4906	52868.326	258	0.962	-,-	-	-0.53	1.0(1.9)	-	-	1.94e-15	-	-
		3938.s3.u	5450	52870.978	256	0.963	-,-	-	-0.53	1.0(1.9)	-	-	1.68e-15	-	-
		3939.s3.u	5443	52878.721	251	0.964	-,-	-	-0.43	1.0(2.4)	-	-	1.83e-15	-	-
		3940.s3.u	5125	52887.675	245	0.966	-,-	-	-0.45	1.2(2.7)	-	-	2.10e-15	-	-
		3941.s3.u	5163	52896.487	241	0.967	-,-	-	-0.52	1.0(1.9)	-	-	1.76e-15	-	-
		3942.s3.u	5512	52905.398	235	0.967	-,-	-	-0.33	1.0(3.0)	-	-	1.81e-15	-	-
		3943.s3.u	5183	52915.980	231	0.968	-,-	-	-0.33	1.0(3.0)	-	-	1.88e-15	-	-
5	CXOJ132945.245+581745.10	3933.s2.5 (1)	48932	52857.249	193	0.984	0.59,0.15	1	4.328	9.4(3.2)	1.00(0.50)	0.27(0.64)	2.29e-15	0.56	hard
5	CXOJ132945.523+583010.30	2028.s2.2 (1)	10145	51918.956	282	0.864	0.49,0.33	1.3	2.825	5.7(2.5)	0.50(0.75)	-0.22(0.89)	7.03e-15	0.64	dim
5	CXOJ132946.920+582316.80	3935.s3.u	4764	52862.799	138	0.983	-,-	-	-0.53	1.0(1.9)	-	-	1.95e-15	-	-
		3936.s3.u	4829	52865.691	135	0.984	-,-	-	-0.53	1.0(1.9)	-	-	1.93e-15	-	-
		3937.s3.u	4906	52868.326	133	0.985	-,-	-	-0.74	2.2(3.0)	-	-	4.16e-15	-	-
		3938.s3.u	5450	52870.978	132	0.985	-,-	-	-0.97	3.1(3.2)	-	-	5.08e-15	-	-
		3939.s3.u	5443	52878.721	130	0.985	-,-	-	-0.34	1.0(3.0)	-	-	1.80e-15	-	-
		3940.s3.3 (1)	5125	52887.675	135	0.984	0.47,0.15	1	1.960	3.8(2.0)	-0.33(0.83)	0.00(1.00)	6.58e-15	0.86	dim
5	CXOJ132950.357+581401.86	3933.s2.2 (1)	48932	52857.249	423	0.915	0.95,0.28	2.5	3.209	8.8(3.3)	-0.71(0.65)	0.15(0.93)	2.29e-15	0.0011	dim
5	CXOJ132950.957+581747.47	3933.s2.3 (1)	48932	52857.249	198	0.979	0.13,0.08	1	30.145	85.4(9.4)	0.49(0.22)	-0.03(0.20)	2.09e-14	0.65	hard
		3934.s2.1 (1)	5015	52860.400	198	0.980	0.32,0.21	1	2.498	4.9(2.2)	1.00(0.50)	-0.05(0.97)	1.11e-14	0.96	dim
5	CXOJ132950.962+583321.78	2028.s2.1 (1)	10145	51918.956	482	0.896	1.00,0.64	3.3	5.484	14.8(4.1)	0.01(0.70)	0.13(0.63)	1.76e-14	0.44	hard
5	CXOJ132951.403+581853.64	3933.s2.1 (1)	48932	52857.249	136	0.877	0.17,0.13	1	5.322	10.7(3.3)	0.23(0.80)	-0.25(0.80)	2.93e-15	0.56	hard
		3934.s2.u	5015	52860.400	132	0.917	-,-	-	-1.19	3.8(3.2)	-	-	9.23e-15	-	-
		3935.s2.u	4764	52862.799	132	0.914	-,-	-	-0.43	1.0(2.3)	-	-	2.85e-15	-	-
5	CXOJ132952.428+581513.61	3933.s2.4 (1)	48932	52857.249	353	0.935	0.37,0.22	1.7	6.570	19.7(4.8)	0.70(0.65)	0.43(0.53)	5.06e-15	0.79	hard
5	CXOJ132954.425+582406.34	3941.s3.u	5163	52896.487	126	0.987	-,-	-	-0.78	2.3(3.0)	-	-	3.97e-15	-	-
		3942.s3.2 (1)	5512	52905.398	119	0.989	0.24,0.18	1	2.771	5.7(2.5)	-0.69(0.66)	-1.00(0.50)	9.99e-15	0.047	dim
		3943.s3.u	5183	52915.980	123	0.988	-,-	-	-0.84	2.7(3.2)	-	-	4.98e-15	-	-
5	CXOJ132955.066+582151.59	3938.s3.u	5450	52870.978	46	0.953	-,-	-	-0.53	1.0(1.9)	-	-	1.70e-15	-	-
		3939.s3.2 (1)	5443	52878.721	22	0.949	0.33,0.18	1	6.154	12.6(3.6)	0.32(0.72)	-0.32(0.72)	2.35e-14	0.041	hard
5	CXOJ132955.783+583440.91	2028.s2.3 (1)	10145	51918.956	569	0.871	1.53,0.77	4.8	5.029	22.2(5.7)	0.13(0.45)	-0.27(0.47)	2.71e-14	0.056	hard
5	CXOJ132956.203+582220.78	3939.s3.1 (1)	5443	52878.721	50	0.996	0.21,0.08	1	9.477	18.8(4.4)	-0.19(0.52)	-0.33(0.71)	3.33e-14	0.85	hard
		3940.s3.1 (1)	5125	52887.675	42	0.999	0.13,0.09	1	9.542	19.6(4.5)	-0.20(0.51)	-0.21(0.68)	3.32e-14	0.3	hard
5	CXOJ132958.030+581538.34	3934.s2.2 (1)	5015	52860.400	339	0.754	0.32,0.65	1.7	2.274	4.7(2.2)	-0.02(0.99)	-0.38(0.81)	1.37e-14	0.96	dim
		3935.s2.u	4764	52862.799	338	0.721	-,-	-	-1.55	5.9(3.8)	-	-	2.13e-14	-	-
5	CXOJ132959.153+582008.84	3937.s3.u	4906	52868.326	93	0.979	-,-	-	-0.53	1.0(1.9)	-	-	1.90e-15	-	-
		3938.s3.2 (1)	5450	52870.978	88	0.980	0.33,0.26	1	3.501	6.8(2.6)	-1.00(0.50)	1.00(0.50)	1.13e-14	0.73	dim
		3939.s3.4 (1)	5443	52878.721	88	0.980	0.37,0.19	1	2.492	4.9(2.2)	0.00(1.00)	0.33(0.83)	8.74e-15	0.59	dim
5	CXOJ133001.097+581610.09	3935.s2.1 (1)	4764	52862.799	315	0.882	0.35,0.44	1.5	2.945	5.8(2.5)	-0.68(0.66)	-1.00(0.50)	1.71e-14	0.67	dim

Table 4—Continued

Group No.	CXOJ[a]	individual[b] detection	Expos.[c] (sec)	OBSMJD[d]	OAA[e] ($''$)	VigF[f]	St. PosErr[g] ($''$,$''$)	PosErr[h] ($''$)	σ[i]	Counts[j]	C_{MS}[k]	C_{HM}[l]	F_X[m] (cgs)	P_{KS}[n]	SQH[o]
		3936.s2.u	4829	52865.691	314	0.862	-,-	-	-0.64	1.9(3.0)	-	-	5.44e-15	-	-
5	CXOJ133025.814+581558.90	3939.s2.1 (1)	5443	52878.721	413	0.779	0.79,0.31	2.4	3.588	7.5(2.8)	0.61(0.70)	-0.15(0.90)	2.09e-14	0.35	dim

[a]source names composed from their positions following CXO naming conventions.

[b]source name in individual observations in form of iiii.ss.nn, with iiii as the observation ID, ss as the CCD chip, and nn as the source number from wavdetect (nn = u if the source was detected in an observation). Enclosed in parenthesis is the split fraction, which is less than unit if the source is a split component of a merged source in an observation.

[c]source exposure time in second after deadtime correction.

[d]modified Julian Date for the observation.

[e]off-axis angle in arcsecond.

[f]vignetting factor derived from the exposure map as the ratio between the local and the maximum map value.

[g]statistical positional error in arcseconds along Right Ascension and Declination.

[h]source positional uncertainties in arcsec computed from the scheme of Kim et al. (2004).

[i]detection significance from wavdetect. For the upper limit, it is computed as (net count)/(count error) and prefixed with a minus sign.

[j]background-subtracted photon counts with its error in parenthesis from wavdetect, or computed from a circular region equivalent to the PSF enclosing 95% of the energy at 1.5 keV for the upper limit.

[k]X-ray color $C_{MS} = (M - S)/(H + M + S)$ with error in parenthesis. H/M/S stands for background-subtracted photon counts in hard (2-8 keV), medium (1-2 keV) and soft (0.3-1 keV) bands.

[l]X-ray color $C_{HM} = (H - M)/(H + M + S)$ with error in parenthesis.

[m]source flux computed from the vignetting corrected count rate in 0.3-8 keV assuming a power law of $\Gamma = 1.7$ and Galactic n_H absorption.

[n]Kolmogorov-Smirnov probability that a source is constant within an observation. A source is considered as variable if $P_{KS} < 0.01$.

[o]whether the source is in an supersoft (SSS), quasi-soft (QSS), hard phase or too dim (i.e., below 10 counts) during an observation.

Table 5. Ultraluminous X-ray sources in nearby galaxies

Group No.	CXOJ[a]	Pos.[b] Err.	source[c] Name	α[d] ($\prime$)	r_{25}[e]	Dis.[f] (Mpc)	V/D[g]	L_{Xmax}[h] (erg/s)	F_{Xavg}[i] (cgs)	F/F[j]	σ_{max}[k]	C_{max}[l]	SQH[m]	Var/KS[n]	Notes[o]
2	CXOJ140229.904+542118.79	1	NGC5457-X4	6.219	0.46	6.855	6/6	3.16e+39	2.28e-13	5.01	271.634	2562.617	q2 h4	v/4	PM* +iv 1ULX
2	CXOJ140303.950+542734.63	1	NGC5457-X2	6.776	0.47	6.855	6/6	4.36e+39	5.77e-13	1.89	268.481	3146.814	h6	v/1	1ULX
2	CXOJ140314.302+541806.23	1	NGC5457-X5	2.825	0.20	6.855	25/18	3.05e+39	1.30e-13	600.67	297.040	3870.985	d2 h16	v/6	1ULX
2	CXOJ140332.381+542102.92	1	NGC5457-X3	2.900	0.22	6.855	25/21	3.82e+39	1.17e-13	778.16	639.966	9233.438	q6 s11 d1 h3	v/6	1ULX
2	CXOJ140414.196+542604.52	1	NGC5457-X1	10.357	0.76	6.855	7/7	4.58e+39	6.97e-13	2.11	201.227	3435.026	h7	v/3	1ULX
4	CXOJ095532.952+690033.59	1	NGC3031-X3	3.441	0.31	3.42	17/17	3.47e+39	1.56e-12	1.98	694.748	9482.748	h17		1ULX
4	CXOJ095753.314+690348.13	1.04	NGC3031-X1	12.490	1.66	3.42	2/2	5.25e+39	3.58e-12	1.09	292.351	1879.141	h2		+v 2ULX
5	CXOJ132938.618+582505.59	1	NGC5204-X1	0.291	0.19	4.3	13/13	9.81e+39	2.51e-12	4.54	640.539	9903.551	q2 h11	v/1	1ULX
6	CXOJ033713.603-354349.22	1.01	NGC1389-X1	0.953	0.84	21.68	1/1	4.86e+39	8.62e-14	1	93.992	290.384	h1		1ULX
6	CXOJ033805.186-352239.00	1	NGC1399-X7	6.494	1.95	19.95	1/1	3.12e+39	6.54e-14	1	34.319	159.455	h1		pm* +v 2ULX
6	CXOJ033827.641-352648.59	1	NGC1399-X9	0.318	0.10	19.95	5/4	2.69e+39	4.97e-14	1.69	34.344	441.916	q1 h3		1ULX
6	CXOJ033829.328-352706.84	1	NGC1399-X10	0.162	0.05	19.95	5/1	2.67e+39	5.59e-14	2.58	14.918	181.727	h1		1ULX
6	CXOJ033829.666-352504.62	1	NGC1399-X11	1.894	0.55	19.95	5/3	2.14e+39	3.30e-14	3.28	29.209	203.958	h3		1ULX
6	CXOJ033831.740-353058.90	1	NGC1399-X8	4.054	1.17	19.95	6/5	2.98e+39	2.35e-14	11.93	32.727	139.171	q1 h4	v/1	GC 2ULX
6	CXOJ033831.819-352604.02	1	NGC1399-X6	1.067	0.31	19.95	5/5	3.36e+39	4.92e-14	1.89	72.609	562.270	q3 h2		1ULX
6	CXOJ033832.602-352705.47	1	NGC1399-X4	0.744	0.23	19.95	5/5	5.21e+39	8.66e-14	1.55	76.987	689.460	h5		1ULX
6	CXOJ033841.376-353134.14	1	NGC1399-X2	5.247	1.54	19.95	6/6	2.9e+40	5.53e-13	1.28	385.971	2740.536	h6		q pm* +rv 2EULX
6	CXOJ033843.543-353307.81	1	NGC1399-X12	6.838	2.00	19.95	6/6	2.13e+39	3.20e-14	2.68	44.225	133.028	d2 h4		pm* GC +v 2ULX
6	CXOJ033843.543-353307.81	1	NGC1404-X4	2.975	1.86	20.99	6/6	2.36e+39	3.20e-14	2.68	44.225	133.028	d2 h4		pm* GC +v 2ULX
6	CXOJ033843.548-353349.46	1	NGC1404-X2	2.429	1.55	20.99	7/7	6.5e+39	6.39e-14	6.15	99.319	290.393	d1 h6		pm* +v 2ULX
6	CXOJ033846.008-352252.07	1	NGC1399-X5	5.367	1.60	19.95	3/3	3.54e+39	5.29e-14	4.47	41.732	207.056	d1 h2		q pm* +riv 2ULX
6	CXOJ033848.701-352834.39	1	NGC1399-X13	4.321	1.33	19.95	5/4	2.04e+39	2.09e-14	5.33	64.055	334.874	d1 h3		+v 2ULX
6	CXOJ033851.506-353542.68	1	NGC1404-X3	0.118	0.07	20.99	6/2	3.76e+39	5.68e-14	1.68	14.268	174.940	h2		1ULX
6	CXOJ033851.617-352644.20	1	NGC1399-X3	4.612	1.43	19.95	5/5	1.89e+40	2.01e-13	3.7	167.682	1274.204	h5		2EULX
7	CXOJ132507.471-430409.48	1	NGC5128-X3	5.044	0.40	4.21	8/8	3e+39	5.87e-13	5.32	391.678	2666.032	q3 h5	v/5	pm* +iv 1ULX
7	CXOJ132518.276-430304.82	1	NGC5128-X2	2.858	0.22	4.21	9/6	3.7e+39	1.48e-12	5420.56	806.841	9656.857	h6		1ULX
8	CXOJ095546.536+694040.73	1	NGC3034-X3	0.703	0.13	5.2	9/9	3.34e+39	5.49e-13	3.44	397.462	7070.847	h9	v/2	1ULX
8	CXOJ095550.102+694046.49	1	NGC3034-X1	0.381	0.07	5.2	9/9	3e+40	5.31e-12	6.21	1113.735	63821.598	h9	v/4	y*cl 1EULX
8	CXOJ095551.010+694044.76	1	NGC3034-X2	0.330	0.07	5.2	9/9	9.77e+39	1.82e-12	5.7	353.712	14518.956	h9	v/2	z y*cl q +i 1ULX
9	CXOJ122001.579+291626.22	1.01	NGC4278-X2	1.274	0.67	16.07	7/1	2.76e+39	8.92e-14	986.73	110.687	346.222	h1		1ULX
10	CXOJ120136.074-185341.75	1	NGC4038-X16	4.366	1.76	25.5	7/7	2.77e+39	2.25e-14	2.75	46.880	252.511	h7		+v 2ULX
10	CXOJ120150.028-184953.80	1	NGC4038-X6	2.115	1.36	25.5	7/7	8.35e+39	4.73e-14	8.11	155.414	843.167	h7	v/1	q pm* +riv 2ULX
10	CXOJ120151.329-185224.85	1	NGC4038-X2	0.634	0.34	25.5	7/7	1.46e+40	1.30e-13	2.93	200.784	1529.929	h7		+v 1EULX
10	CXOJ120151.329-185224.85	1	NGC4039-X2	0.917	0.61	25.3	7/7	1.44e+40	1.30e-13	2.93	200.784	1529.929	h7		+v 1EULX
10	CXOJ120151.598-185231.33	1	NGC4038-X12	0.694	0.40	25.5	7/7	3.43e+39	2.17e-14	5.04	50.858	346.872	s7		1ULX
10	CXOJ120151.598-185231.33	1	NGC4039-X10	0.794	0.52	25.3	7/7	3.38e+39	2.17e-14	5.04	50.858	346.872	s7		1ULX
10	CXOJ120152.090-185133.12	1	NGC4038-X1	0.397	0.25	25.5	7/7	1.65e+40	1.40e-13	11.16	257.557	2045.557	h7	v/1	1EULX
10	CXOJ120152.090-185133.12	1	NGC4039-X1	1.606	1.43	25.3	7/7	1.63e+40	1.40e-13	11.16	257.557	2045.557	h7	v/1	2EULX
10	CXOJ120152.399-185206.28	1	NGC4038-X9	0.237	0.13	25.5	7/7	4.1e+39	3.28e-14	2.01	65.596	430.760	h7	v/1	1ULX
10	CXOJ120152.399-185206.28	1	NGC4039-X7	1.057	0.90	25.3	7/7	4.04e+39	3.28e-14	2.01	65.596	430.760	h7	v/1	1ULX
10	CXOJ120153.508-185310.50	1	NGC4038-X7	1.283	0.83	25.5	7/7	7.96e+39	9.32e-14	1.22	69.264	853.375	h7		PM* +iv 1ULX
10	CXOJ120153.508-185310.50	1	NGC4039-X6	0.120	0.15	25.3	7/7	7.83e+39	9.32e-14	1.22	69.264	853.375	h7		PM* +iv 1ULX
10	CXOJ120154.278-185201.42	1	NGC4038-X10	0.349	0.16	25.5	7/7	3.74e+39	4.08e-14	1.43	49.481	401.130	h7		1ULX
10	CXOJ120154.278-185201.42	1	NGC4039-X8	1.080	1.19	25.3	7/7	3.68e+39	4.08e-14	1.43	49.481	401.130	h7		2ULX
10	CXOJ120154.353-185209.84	1	NGC4038-X14	0.433	0.24	25.5	7/6	3.15e+39	2.48e-14	310.77	50.155	389.084	h6		1ULX
10	CXOJ120154.353-185209.84	1	NGC4039-X12	0.942	1.05	25.3	7/6	3.1e+39	2.48e-14	310.77	50.155	389.084	h6		2ULX
10	CXOJ120154.547-185303.41	1	NGC4038-X13	1.221	0.79	25.5	7/7	3.17e+39	1.94e-14	4.77	26.179	179.664	q1 h6		PM* +iv 1ULX
10	CXOJ120154.547-185303.41	1	NGC4039-X11	0.160	0.18	25.3	7/7	3.12e+39	1.94e-14	4.77	26.179	179.664	q1 h6		PM* +iv 1ULX
10	CXOJ120154.787-185251.64	1	NGC4038-X11	1.059	0.67	25.5	7/7	3.54e+39	2.25e-14	4.41	35.199	226.477	h7		+v 1ULX
10	CXOJ120154.787-185251.64	1	NGC4039-X9	0.319	0.40	25.3	7/7	3.49e+39	2.25e-14	4.41	35.199	226.477	h7		+v 1ULX

Table 5—Continued

Group No.	CXOJ[a]	Pos.[b] Err.	source[c] Name	α[d] ($'$)	r_{25}[e]	Dis.[f] (Mpc)	V/D[g]	$L_{X max}$[h] (erg/s)	$F_{X avg}$[i] (cgs)	F/F[j]	σ_{max}[k]	C_{max}[l]	SQH[m]	Var/KS[n]	Notes[o]
10	CXOJ120154.979-185314.53	1	NGC4038-X5	1.429	0.92	25.5	7/7	1.03e+40	9.60e-14	2.63	138.418	1052.957	h7		+v 1EULX
10	CXOJ120154.979-185314.53	1	NGC4039-X5	0.292	0.20	25.3	7/7	1.01e+40	9.60e-14	2.63	138.418	1052.957	h7		+v 1EULX
10	CXOJ120155.236-184917.40	1	NGC4038-X8	2.668	1.65	25.5	7/7	4.95e+39	3.34e-14	3.58	91.237	473.221	h7		q pm* +rv 2ULX
10	CXOJ120155.658-185214.59	1	NGC4038-X4	0.737	0.37	25.5	7/7	1.16e+40	9.28e-14	2.92	128.579	1428.535	h7	v/2	+iv 1EULX
10	CXOJ120155.658-185214.59	1	NGC4039-X4	0.952	1.18	25.3	7/7	1.14e+40	9.28e-14	2.92	128.579	1428.535	h7	v/2	+iv 2EULX
10	CXOJ120156.434-185157.38	1.01	NGC4038-X3	0.838	0.34	25.5	7/7	1.24e+40	1.27e-13	1.7	202.453	1365.240	h7		1EULX
10	CXOJ120156.434-185157.38	1.01	NGC4039-X3	1.291	1.61	25.3	7/7	1.22e+40	1.27e-13	1.7	202.453	1365.240	h7		2EULX
10	CXOJ120158.222-185204.26	1	NGC4038-X15	1.270	0.53	25.5	7/6	2.99e+39	1.60e-14	75.25	85.897	367.037	q2 h4		1ULX
10	CXOJ120158.222-185204.26	1	NGC4039-X13	1.450	1.83	25.3	7/6	2.94e+39	1.60e-14	75.25	85.897	367.037	q2 h4		2ULX
10	CXOJ120207.733-185250.88	1	NGC4038-X17	3.635	1.61	25.5	7/7	2.15e+39	1.96e-14	2.62	44.864	192.867	h7		2ULX
11	CXOJ124826.141-411756.47	1	NGC4696-X3	4.500	2.02	35.48	5/5	2.07e+40	1.04e-13	1.94	47.850	865.652	h5		+iv 2EULX
11	CXOJ124832.479-411832.22	1	NGC4696-X5	3.255	1.46	35.48	6/6	6.87e+39	3.00e-14	3.67	21.529	336.162	h6		2ULX
11	CXOJ124836.497-411820.88	1	NGC4696-X11	2.517	1.13	35.48	6/3	2.1e+39	1.19e-14	43.57	10.254	108.310	h3		2ULX
11	CXOJ124839.262-412024.11	1	NGC4696-X9	2.643	1.44	35.48	6/6	3.55e+39	1.77e-14	1.84	12.596	99.611	h6		2ULX
11	CXOJ124839.264-411738.44	1	NGC4696-X6	2.221	1.06	35.48	6/5	4.35e+39	2.48e-14	23.04	14.707	216.842	h5		2ULX
11	CXOJ124841.441-412047.76	1	NGC4696-X8	2.659	1.53	35.48	6/6	3.94e+39	2.25e-14	1.83	20.482	198.883	q1 h5		2ULX
11	CXOJ124842.804-411609.62	1	NGC4696-X7	2.815	1.61	35.48	6/6	4.32e+39	2.32e-14	1.63	17.311	184.485	h6		2ULX
11	CXOJ124843.015-411541.36	1	NGC4696-X4	3.223	1.88	35.48	6/6	1.57e+40	8.00e-14	1.47	37.666	520.182	h6		pm* +v 2EULX
11	CXOJ124853.460-411912.79	1	NGC4696-X10	0.889	0.45	35.48	7/4	2.9e+39	1.20e-14	23.7	8.051	78.181	q2 h2		1ULX
11	CXOJ124906.247-411751.18	1	NGC4696-X2	3.190	1.50	35.48	6/6	2.66e+40	1.35e-13	1.59	76.350	551.947	h6		pm* +iv 2EULX
11	CXOJ124954.202-411650.77	2.25	NGC4706-X1	0.023	0.08	51.5	2/1	6.81e+39	2.14e-14	14.76	5.375	45.110	h1		PM* +v 1ULX
12	CXOJ020819.694+105743.16	1	NGC821-X1	2.044	1.67	24.10	7/7	1.12e+40	1.12e-13	1.94	118.424	424.839	h7		2EULX
14	CXOJ033312.852-361153.70	1	NGC1365-X4	6.001	1.22	17.38	6/6	4.28e+39	9.51e-14	1.77	38.79	154.811	h6		q pm* +rv 2ULX
14	CXOJ033334.152-361102.54	1	NGC1365-X5	2.803	0.57	17.38	1/1	3.02e+39	8.34e-14	1	52.170	144.610	h1		q pm* +riv 1ULX
14	CXOJ033334.620-360936.43	1	NGC1365-X2	1.382	0.27	17.38	7/7	1.82e+40	3.36e-13	4.61	246.093	919.045	h7	v/1	1EULX
14	CXOJ033335.969-360832.57	1	NGC1365-X7	0.289	0.05	17.38	7/5	2.55e+39	5.22e-14	2.07	17.317	130.232	q3 h2		1ULX
14	CXOJ033338.016-360935.21	1	NGC1365-X6	1.334	0.35	17.38	2/1	2.83e+39	7.82e-14	130.55	51.824	138.925	h1		1ULX
14	CXOJ033341.842-360731.37	1	NGC1365-X3	1.303	0.27	17.38	7/6	1.11e+40	1.46e-13	498.37	151.855	566.301	h6		+i 1EULX
14	CXOJ033344.275-360717.90	1	NGC1365-X8	1.836	0.39	17.38	7/6	2.08e+39	3.68e-14	100.35	40.641	112.614	h6		1ULX
15	CXOJ031738.669-663303.53	1	NGC1313-X3	4.873	1.27	3.7	3/3	2.17e+39	1.31e-12	1.02	313.105	2815.651	h3		q SN +rv 2ULX
15	CXOJ031819.999-662910.97	1	NGC1313-X1	0.804	0.20	3.7	5/5	2.32e+40	7.24e-12	5.47	505.880	10763.779	h5	v/2	1EULX
15	CXOJ031822.262-663603.56	1	NGC1313-X2	6.246	1.38	3.7	6/6	6.24e+39	2.74e-12	2.41	442.992	7147.682	h6		2ULX
16	CXOJ104749.992+123456.82	1.05	NGC3379-X1	0.023	0.01	10.57	5/5	3.43e+39	1.88e-13	2.17	294.014	2552.731	h5	v/1	1ULX
16	CXOJ104817.508+123756.32	1	NGC3384-X1	0.143	0.06	11.59	1/1	3.51e+39	2.18e-13	1	81.464	233.277	h1		1ULX
17	CXOJ122414.599+071535.28	1	NGC4365-X2	4.818	1.39	20.42	6/6	3.87e+39	4.33e-14	2.59	46.446	213.652	h6		pm* +v 2ULX
17	CXOJ122426.352+071653.54	1	NGC4365-X5	2.241	0.72	20.42	6/6	2.03e+39	3.57e-14	1.58	58.139	190.259	h6		+v 1ULX
17	CXOJ122437.843+072310.68	1	NGC4365-X3	4.765	1.39	20.42	6/6	3.66e+39	4.87e-14	4.6	44.513	310.929	h6		q pm* +rv 2ULX
17	CXOJ122440.841+072203.97	1	NGC4365-X4	4.369	1.27	20.42	6/6	2.54e+39	3.81e-14	2.36	38.858	232.110	h6	v/1	+v 2ULX
18	CXOJ061713.476+782511.24	1.42	NGC2146-X6	5.830	1.98	17.2	4/4	2.49e+39	4.63e-14	6.69	15.119	39.683	d1 h3		pm* +iv 2ULX
18	CXOJ061721.706+782221.14	1.04	NGC2146-X5	4.086	1.78	17.2	6/6	2.75e+39	6.08e-14	2.39	24.790	57.960	h6		pm* +v 2ULX
18	CXOJ061836.965+782127.32	1	NGC2146-X3	0.210	0.07	17.2	6/6	3.22e+39	6.38e-14	2.16	19.590	81.698	h6		1ULX
18	CXOJ061839.653+782114.54	1	NGC2146-X1	0.078	0.04	17.2	6/6	4.33e+39	1.02e-13	1.89	25.067	110.998	h6		1ULX
18	CXOJ061840.814+782125.24	1	NGC2146-X7	0.110	0.06	17.2	6/5	2.03e+39	4.44e-14	2.9	10.195	54.157	q4 h1		1ULX
18	CXOJ061848.662+782506.13	1.02	NGC2146-X4	3.810	1.85	17.2	6/6	2.79e+39	5.70e-14	2.29	24.630	57.923	h6		2ULX
18	CXOJ061913.999+782145.00	1	NGC2146-X2	1.764	0.97	17.2	6/6	3.26e+39	6.77e-14	1.65	31.171	80.085	h6		1ULX
19	CXOJ073625.562+653539.95	1	NGC2403-X1	3.004	0.39	3.133	3/3	2.2e+39	1.64e-12	1.38	518.790	7319.747	h3		1ULX
20	CXOJ203500.746+601130.66	1	NGC6946-X1	2.508	0.45	5.5	5/5	6.35e+39	1.57e-12	1.25	508.492	8327.313	h5		1ULX
21	CXOJ015249.721-134216.13	1	NGC720-X2	3.326	1.50	27.67	5/5	5.35e+39	4.83e-14	1.4	68.230	263.555	h5		PM* +v 2ULX
21	CXOJ015255.668-134129.54	1	NGC720-X4	3.080	1.48	27.67	5/5	4.16e+39	3.11e-14	1.71	26.834	119.758	h5		2ULX
21	CXOJ015259.395-134357.32	1	NGC720-X8	0.464	0.20	27.67	5/5	2.13e+39	1.57e-14	2.17	19.933	110.228	q1 h4		1ULX

Table 5—Continued

Group No.	CXOJ[a]	Pos.[b] Err.	source[c] Name	α[d] (′)	r_{25}[e]	Dis.[f] (Mpc)	V/D[g]	$L_{X max}$[h] (erg/s)	$F_{X avg}$[i] (cgs)	F/F[j]	σ_{max}[k]	C_{max}[l]	SQH[m]	Var/KS[n]	Notes[o]
21	CXOJ015300.326-134414.35	1	NGC720-X7	0.112	0.06	27.67	5/4	2.43e+39	2.11e-14	1.8	11.963	86.810	h4		PM* +v 1ULX
21	CXOJ015301.118-134419.57	1	NGC720-X6	0.176	0.13	27.67	5/5	2.9e+39	2.48e-14	1.94	20.079	133.079	h5		1ULX
21	CXOJ015301.754-134630.90	1	NGC720-X3	2.190	1.24	27.67	5/5	4.72e+39	4.14e-14	1.64	67.291	295.272	h5		2ULX
21	CXOJ015303.029-134654.48	1	NGC720-X1	2.636	1.40	27.67	5/5	1.3e+40	1.00e-13	1.84	108.435	545.503	h5		q pm* +rv 2EULX
22	CXOJ114606.154+472855.24	1.01	NGC3877-X1	0.794	0.38	17.0	5/5	8.77e+39	1.83e-13	2.48	193.795	725.224	h5		pm* SN +iv 1ULX
24	CXOJ133001.020+471343.93	1	NGC5194-X3	2.335	0.59	7.7	4/3	2.48e+39	2.07e-13	55.84	247.357	1893.464	h3	v/1	+iv 1ULX
24	CXOJ133001.020+471343.93	1	NGC5195-X1	2.647	1.16	7.66	4/3	2.46e+39	2.07e-13	55.84	247.357	1893.464	h3	v/1	+iv 2ULX
24	CXOJ133007.553+471106.00	1	NGC5194-X2	2.520	0.66	7.7	5/5	3.63e+39	3.55e-13	3.86	369.042	2192.340	h5	v/1	1ULX
25	CXOJ124252.903+023749.66	1	NGC4636-X1	3.542	1.21	14.66	4/4	2.35e+39	7.26e-14	1.47	91.330	555.878	q1 h3		2ULX
27	CXOJ122503.317+125315.47	1	NGC4374-X7	0.095	0.03	18.37	4/1	2.35e+39	5.80e-14	7.92	3.749	11.957	d1		1ULX
27	CXOJ122503.480+125319.36	1	NGC4374-X6	0.091	0.03	18.37	4/4	2.35e+39	4.40e-14	1.79	19.108	212.391	d1 h3		1ULX
27	CXOJ122503.761+125316.48	1	NGC4374-X5	0.028	0.01	18.37	4/1	2.39e+39	5.90e-14	2.02	20.808	230.344	h1		+r 1ULX
27	CXOJ122504.164+125311.98	1	NGC4374-X4	0.123	0.04	18.37	4/3	2.4e+39	4.83e-14	1.54	20.798	231.306	s1 h2		1ULX
27	CXOJ122511.918+125153.64	1	NGC4374-X2	2.418	0.75	18.37	3/3	1.71e+40	3.58e-13	1.31	294.840	1642.545	h3		q pm* +v 1EULX
27	CXOJ122515.086+125602.69	1	NGC4374-X3	3.938	1.40	18.37	4/4	4.66e+39	4.72e-14	8.04	81.903	411.551	d1 h3		+v 2ULX
28	CXOJ041931.205+022505.63	1	NGC1550-X2	1.844	1.87	49.5	4/2	9.14e+39	2.62e-14	2.85	16.422	103.582	h2		+v 2ULX
28	CXOJ041934.483+022623.57	1.08	NGC1550-X4	2.045	2.02	49.5	4/2	3.88e+39	9.91e-15	3.94	11.501	56.464	h2		2ULX
28	CXOJ041939.137+022432.18	1	NGC1550-X6	0.215	0.22	49.5	4/1	2.97e+39	1.01e-14	1	4.062	39.336	q1		1ULX
28	CXOJ041940.428+022627.89	1.1	NGC1550-X5	1.955	1.76	49.5	4/3	3.68e+39	1.07e-14	6.13	9.969	51.987	h3		+v 2ULX
28	CXOJ041941.184+022421.31	1	NGC1550-X3	0.756	0.77	49.5	4/2	4.06e+39	1.27e-14	8.79	7.233	45.198	d1 h1		1ULX
29	CXOJ112015.758+133513.60	1	NGC3628-X1	0.192	0.11	10.6	2/2	1.05e+40	6.08e-13	1.8	441.103	3063.408	h2		1EULX
30	CXOJ013651.074+154546.94	1	NGC628-X1	2.563	0.54	9.7	4/3	2.07e+39	8.67e-14	31.72	162.457	944.573	d1 h2	v/2	pm* +v 1ULX
31	CXOJ141239.041-652333.00	1	PGC50779-X1	4.565	1.34	4.2	4/4	1.49e+40	4.36e-12	3.4	358.307	4939.292	h4		2EULX
31	CXOJ141310.044-652044.77	1	PGC50779-X4	0.447	0.22	4.2	4/4	3.79e+39	1.56e-12	1.32	285.983	1772.723	h4		SN 1ULX
31	CXOJ141310.270-652018.02	1	PGC50779-X5	0.049	0.03	4.2	4/4	2.2e+39	7.04e-13	1.94	67.439	685.703	h4		1ULX
31	CXOJ141312.245-652013.88	1	PGC50779-X3	0.264	0.12	4.2	4/4	1.33e+40	2.72e-12	9.69	292.935	3065.202	h4	v/2	1EULX
35	CXOJ123030.511+414142.32	1	NGC4485-X1	0.382	0.35	9.3	3/3	6.14e+39	4.89e-13	1.44	284.477	1820.931	h3		1ULX
35	CXOJ123030.511+414142.32	1	NGC4490-X1	3.517	1.61	7.8	3/3	4.32e+39	4.89e-13	1.44	284.477	1820.931	h3		2ULX
35	CXOJ123030.758+413911.66	1	NGC4490-X4	1.375	0.44	7.8	3/3	2.8e+39	3.29e-13	1.4	238.596	1492.398	h3		1ULX
35	CXOJ123032.203+413918.22	1	NGC4490-X2	1.246	0.42	7.8	3/3	3.42e+39	3.49e-13	2.14	255.557	1643.264	h3		1ULX
35	CXOJ123036.266+413837.97	1	NGC4490-X5	0.262	0.12	7.8	3/3	2.54e+39	2.19e-13	3.94	228.049	1594.830	h3		1ULX
35	CXOJ123043.186+413818.64	1	NGC4490-X3	1.214	0.53	7.8	3/3	3.31e+39	4.05e-13	1.21	343.446	2072.407	h3		1ULX
37	CXOJ034555.627+680455.42	1.06	IC342-X1	5.112	0.49	3.9	3/3	5.84e+39	2.97e-12	1.27	771.437	10481.323	h3		1ULX
39	CXOJ024238.890-000055.12	1	NGC1068-X4	0.348	0.10	14.4	3/2	5.57e+39	1.86e-13	3.38	125.912	1509.076	h2		pm* +iv 1ULX
39	CXOJ024239.710-000101.45	1	NGC1068-X5	0.256	0.08	14.4	3/2	2.34e+39	9.26e-14	5.99	39.407	578.561	h2		1ULX
39	CXOJ024241.268-000037.66	1.02	NGC1068-X3	0.318	0.09	14.4	3/1	7.46e+39	3.00e-13	7.03	23.692	530.728	q1		1ULX
39	CXOJ024244.422-000633.30	1	NGC1068-X2	5.851	1.94	14.4	1/1	1.18e+40	4.75e-13	1	177.719	2052.469	q1		PM* +iv 2EULX
40	CXOJ122923.712+075359.14	1	NGC4472-X2	8.222	1.93	16.29	2/2	7.39e+39	1.43e-13	4.34	55.867	789.370	h2		q pm* +rv 2ULX
40	CXOJ122927.785+080630.96	1	NGC4472-X3	8.023	1.58	16.29	2/2	5.7e+39	1.52e-13	1.43	43.197	104.721	h2		2ULX
40	CXOJ122934.786+080933.59	1.47	NGC4472-X4	10.022	1.97	16.29	2/2	4.43e+39	1.33e-13	1.09	21.657	86.248	h2		q pm* +rv 2ULX
40	CXOJ122937.848+074932.34	4.22	NGC4470-X1	0.173	0.27	31.2	1/1	2.84e+39	2.43e-14	1	7.132	70.300	h1		+v;pm* +iv 1ULX
40	CXOJ122939.658+075332.68	1	NGC4472-X5	6.642	1.43	16.29	2/2	3.53e+39	9.17e-14	1.53	47.421	369.593	h2		PM* +v 2ULX
40	CXOJ122946.930+075955.28	1.01	NGC4472-X6	0.115	0.03	16.29	2/1	2.79e+39	8.77e-14	2.21	26.568	477.580	h1		1ULX
40	CXOJ123006.310+080203.55	1	NGC4472-X7	5.332	1.28	16.29	2/2	2.01e+39	4.27e-14	2.81	42.625	305.668	h2		+v 2ULX
41	CXOJ121857.854+471607.43	1	NGC4258-X2	2.143	0.36	7.727	2/2	2.21e+39	2.71e-13	1.32	212.648	826.419	h2		1ULX
42	CXOJ121021.907+392150.94	1	NGC4151-X4	3.383	1.09	20.3	2/2	2.44e+39	3.56e-14	2.27	53.186	165.306	d1 h1		2ULX
42	CXOJ121022.397+392316.91	1	NGC4151-X3	2.366	0.76	20.3	1/1	4.63e+39	9.37e-14	1	99.112	327.443	h1		pm* +v 1ULX
42	CXOJ121032.086+392416.81	1	NGC4151-X2	0.257	0.08	20.3	3/1	6.13e+39	1.24e-13	1	18.087	121.844	s1		1ULX
44	CXOJ123551.720+275604.34	1.01	NGC4559-X1	2.034	0.89	5.8	3/3	6.42e+39	1.25e-12	1.76	485.357	2279.092	h3		1ULX
44	CXOJ123558.560+275742.08	1	NGC4559-X2	0.196	0.09	5.8	3/3	3.88e+39	7.05e-13	1.9	273.006	1349.210	h3		1ULX

Table 5—Continued

Group No.	CXOJ[a]	Pos. Err.[b]	source Name[c]	α[d] ($\prime$)	r_{25}[e]	Dis.[f] (Mpc)	V/D[g]	L_{Xmax}[h] (erg/s)	F_{Xavg}[i] (cgs)	F/F[j]	σ_{max}[k]	C_{max}[l]	SQH[m]	Var/KS[n]	Notes[o]
45	CXOJ022231.289+421957.54	1.08	NGC891-X2	0.905	0.13	8.36	2/2	2.39e+39	2.47e-13	1.36	316.851	2494.514	h2		SN 1ULX
45	CXOJ022231.390+422024.11	1.18	NGC891-X1	0.508	0.14	8.36	2/2	2.89e+39	3.08e-13	1.26	407.008	3263.494	h2		1ULX
46	CXOJ085333.653+511929.57	1.01	NGC2681-X1	0.616	0.34	17.22	2/2	4.13e+39	7.88e-14	2.79	238.075	1171.382	h2		1ULX
49	CXOJ041059.426-312450.29	1	PGC14617-X1	0.422	0.56	18.2	2/2	3.77e+39	5.49e-14	6.36	158.264	576.758	h2		pm* SN +v 1ULX
50	CXOJ033658.750-353224.14	1	NGC1387-X1	2.047	1.45	20.32	1/1	6.64e+39	1.34e-13	1	114.533	393.804	h1		2ULX
52	CXOJ112729.990+565249.55	1	NGC3683-X1	0.308	0.41	28.4	2/2	1.07e+40	6.45e-14	6.17	101.045	512.194	h2	v/1	+rv 1EULX
52	CXOJ112734.752+565222.73	1	NGC3683-X2	0.496	0.55	28.4	2/2	2.57e+39	2.36e-14	1.3	34.077	116.850	h2		1ULX
54	CXOJ005202.731+473307.88	1	NGC278-X1	0.342	0.34	11.8	2/2	4.46e+39	1.43e-13	13.48	153.442	928.252	h2		1ULX
55	CXOJ032614.878-212126.14	1	NGC1332-X2	1.404	1.95	22.91	2/2	5.95e+39	9.28e-14	1.04	111.193	599.467	h2		2ULX
58	CXOJ101623.587-333141.95	1	IC2560-X2	2.360	1.65	39.0	2/2	3.5e+39	1.24e-14	3.4	12.404	28.967	q1 h1		pm* +v 2ULX
59	CXOJ123614.592+260052.99	1.03	NGC4565-X4	2.250	0.38	17.46	2/2	2.58e+39	5.77e-14	1.58	118.613	486.149	h2		1ULX
59	CXOJ123617.402+255855.42	1	NGC4565-X1	0.737	0.59	17.46	2/2	2.65e+40	6.19e-13	1.41	432.121	3342.392	h2		1EULX
59	CXOJ123619.013+260027.00	1	NGC4565-X3	1.412	0.67	17.46	2/2	4.17e+39	8.92e-14	1.77	187.554	821.331	q1 h1	v/1	1ULX
59	CXOJ123630.374+261149.81	6.89	IC3582-X1	0.275	1.47	95.0	1/1	1.32e+40	1.22e-14	1	5.158	28.778	q1		+v 2EULX
63	CXOJ102737.481-435305.86	1	NGC3256-X6	2.812	1.60	37.4	2/2	7.75e+39	3.23e-14	2.51	46.105	121.104	h2		+v 2ULX
63	CXOJ102738.146-435432.04	1	NGC3256-X18	2.414	1.36	37.4	2/2	3.02e+39	1.37e-14	1.91	14.418	52.700	q2		2ULX
63	CXOJ102749.858-435426.46	1	NGC3256-X15	0.315	0.21	37.4	2/1	3.93e+39	2.34e-14	70.69	14.844	59.642	h1		1ULX
63	CXOJ102750.045-435420.70	1	NGC3256-X12	0.262	0.14	37.4	2/1	4.7e+39	2.80e-14	2.19	11.185	85.089	h1		1ULX
63	CXOJ102750.561-435420.45	1	NGC3256-X7	0.170	0.09	37.4	2/1	6.08e+39	3.62e-14	2.02	11.188	94.416	h1		1ULX
63	CXOJ102750.657-435411.77	1	NGC3256-X11	0.205	0.14	37.4	2/1	4.75e+39	2.83e-14	1.08	8.529	72.858	q1		1ULX
63	CXOJ102750.748-435415.52	1	NGC3256-X8	0.155	0.09	37.4	2/1	5.56e+39	3.31e-14	5.61	9.853	85.618	h1		1ULX
63	CXOJ102750.753-435424.01	1	NGC3256-X5	0.150	0.10	37.4	2/1	9.69e+39	5.77e-14	1.25	16.481	148.542	q1		1ULX
63	CXOJ102751.029-435404.21	1	NGC3256-X16	0.277	0.24	37.4	2/1	3.27e+39	1.95e-14	3.01	8.042	52.791	h1		1ULX
63	CXOJ102751.230-435419.37	1	NGC3256-X9	0.050	0.03	37.4	2/1	5.09e+39	3.03e-14	2.71	10.338	78.840	h1		1ULX
63	CXOJ102751.233-435358.74	1	NGC3256-X14	0.358	0.32	37.4	2/2	4.2e+39	2.38e-14	1.11	11.291	68.395	h2		pm* +iv 1ULX
63	CXOJ102751.257-435423.47	1	NGC3256-X13	0.072	0.06	37.4	2/1	4.4e+39	2.62e-14	1	9.938	67.823	h1		1ULX
63	CXOJ102751.266-435402.99	1	NGC3256-X17	0.287	0.26	37.4	2/1	3.19e+39	1.90e-14	57.58	6.757	51.634	h1		1ULX
63	CXOJ102751.607-435409.58	1	NGC3256-X3	0.175	0.16	37.4	2/2	1.91e+40	1.14e-13	1	28.883	346.684	h2		1EULX
63	CXOJ102751.713-435413.46	1	NGC3256-X2	0.116	0.11	37.4	2/2	2.97e+40	1.52e-13	1.39	42.577	537.581	h2		pm* +iv 1EULX
63	CXOJ102752.032-435412.28	1	NGC3256-X4	0.160	0.14	37.4	2/1	9.79e+39	5.83e-14	1	16.562	155.936	h1		1ULX
63	CXOJ102752.567-435349.96	1	NGC3256-X19	0.537	0.50	37.4	2/2	2.72e+39	1.58e-14	1.05	12.960	47.358	h2		1ULX
63	CXOJ102755.150-435446.87	1	NGC3256-X10	0.795	0.49	37.4	2/2	5.05e+39	2.93e-14	1.05	29.845	92.497	h2		1ULX
64	CXOJ125053.318+410714.02	1	NGC4736-X1	0.086	0.02	5.20	2/2	2.47e+39	7.20e-13	1.12	271.786	5502.371	h2		pm* +v 1ULX
65	CXOJ225724.718-410343.81	1	NGC7424-X2	1.335	0.32	11.5	2/2	7.68e+39	2.59e-13	14.36	296.084	1433.005	h2		pm* +v 1ULX
65	CXOJ225728.946-410211.94	1.01	NGC7424-X1	2.840	0.65	11.5	2/2	7.97e+39	4.33e-13	1.38	321.543	1433.785	h2		1ULX
67	CXOJ123638.870+131233.91	1	NGC4569-X4	3.889	1.68	16.8	2/2	3.08e+39	8.78e-14	1.08	70.630	332.956	h2		pm* +v 2ULX
67	CXOJ123643.414+131512.92	1.15	IC3583-X1	0.315	0.32	16.8	1/1	3.79e+39	1.12e-13	1	7.621	15.642	h1		1ULX
67	CXOJ123643.414+131512.92	1.15	NGC4569-X2	5.655	1.89	16.8	1/1	3.79e+39	1.12e-13	1	7.621	15.642	h1		2ULX
67	CXOJ123646.253+130400.37	1	NGC4569-X6	5.869	1.36	16.8	1/1	2.06e+39	6.07e-14	1	30.512	241.797	h1		+v 2ULX
67	CXOJ123653.690+131153.88	1	NGC4569-X5	2.273	0.48	16.8	2/2	2.07e+39	4.64e-14	1.92	45.296	142.175	h2		1ULX
67	CXOJ123709.454+131509.65	1	NGC4569-X3	7.136	1.75	16.8	1/1	3.56e+39	1.05e-13	1	45.140	275.669	q1		pm* +iv 2ULX
68	CXOJ120922.186+295559.70	1.01	NGC4136-X1	0.962	0.51	9.7	2/2	2.56e+39	1.88e-13	1.52	151.811	501.446	h2	v/1	1ULX
69	CXOJ123740.296+114727.53	1.14	NGC4579-X2	1.972	0.82	16.8	1/1	1.2e+40	3.54e-13	1	354.230	1700.310	h1		1EULX
69	CXOJ123743.200+114901.13	1	NGC4579-X3	0.295	0.11	16.8	2/1	2.41e+39	7.12e-14	6.78	30.550	347.271	h1		1ULX
72	CXOJ131519.534+420302.23	1	NGC5055-X1	5.605	0.90	8.5	2/2	1.81e+40	1.66e-12	1.69	202.062	2367.864	h2		1EULX
72	CXOJ131546.646+420201.10	1	NGC5055-X2	0.499	0.09	8.5	2/2	2.35e+39	1.54e-13	7.27	41.378	133.711	q1 s1		pm* +iv 1ULX
73	CXOJ092158.663+505612.41	1	NGC2841-X1	2.362	1.03	12.0	2/2	3.01e+39	1.00e-13	6.62	105.407	577.676	d1 h1		+v 2ULX
74	CXOJ123128.570+254457.55	1	NGC4494-X2	1.746	0.82	17.06	2/2	3.77e+39	8.63e-14	1.67	61.879	191.371	q1 h1		+v 1ULX
74	CXOJ123129.606+254621.90	1	NGC4494-X3	1.196	0.68	17.06	2/2	3.23e+39	6.65e-14	2.28	81.212	289.192	q1 h1		1ULX
77	CXOJ123200.389+142442.37	1	NGC4501-X2	0.608	0.20	16.8	1/1	3.66e+39	1.08e-13	1	51.741	207.668	h1		1ULX

Table 5—Continued

Group No.	CXOJ[a]	Pos. Err.[b]	source Name[c]	α[d] ($\prime$)	r_{25}[e]	Dis.[f] (Mpc)	V/D[g]	L_{Xmax}[h] (erg/s)	F_{Xavg}[i] (cgs)	F/F[j]	σ_{max}[k]	C_{max}[l]	SQH[m]	Var/KS[n]	Notes[o]
77	CXOJ123200.934+142502.60	1	NGC4501-X1	0.402	0.12	16.8	1/1	3.93e+39	1.16e-13	1	61.673	222.915	h1		1ULX
79	CXOJ123945.209-113849.70	1	NGC4594-X2	3.770	1.15	9.77	1/1	4.19e+39	3.66e-13	1	179.687	669.325	s1	v/1	q pm*G0 +riv 2ULX
79	CXOJ124001.056-113723.99	1	NGC4594-X3	0.406	0.09	9.77	2/2	2.44e+39	1.66e-13	1.78	89.987	468.095	s2		pm* +iv 1ULX
82	CXOJ153427.211+151112.55	1	NGC5953-X3	1.346	2.00	33.0	2/2	4.85e+39	3.32e-14	1.27	19.397	43.239	h2		+v 2ULX
82	CXOJ153434.961+151149.27	1	NGC5953-X2	0.629	0.94	33.0	2/2	8.29e+39	6.12e-14	1.07	27.521	65.814	h2		1ULX
82	CXOJ153434.961+151149.27	1	NGC5954-X2	0.379	0.61	32.1	2/2	7.84e+39	6.12e-14	1.07	27.521	65.814	h2		1ULX
83	CXOJ133810.697-094727.10	1	PGC48179-X1	0.660	0.58	22.7	2/2	3.9e+39	5.23e-14	1.52	10.258	20.711	h2		1ULX
84	CXOJ024619.805-301602.89	1	NGC1097-X2	0.359	0.11	16.8	2/2	6.88e+39	1.97e-13	1.06	57.275	146.821	h2		1ULX
84	CXOJ024625.080-301719.03	1	NGC1097-X3	1.648	0.35	16.8	1/1	2.9e+39	8.56e-14	1	27.755	59.446	q1		1ULX
85	CXOJ141311.954-031232.76	1	NGC5506-X2	0.741	0.63	28.7	1/1	3.65e+39	3.69e-14	1	17.361	40.043	h1		1ULX
93	CXOJ112054.312+531040.80	1	NGC3631-X1	1.318	0.55	21.6	1/1	2.27e+40	4.06e-13	1	417.368	4124.842	h1		1EULX
93	CXOJ112105.971+530722.76	1.04	NGC3631-X2	2.945	1.17	21.6	1/1	7.61e+39	1.36e-13	1	271.261	1401.393	h1		pm* +iv 2ULX
93	CXOJ112110.291+531011.96	1	NGC3631-X4	1.140	0.48	21.6	1/1	3.36e+39	6.01e-14	1	116.706	611.757	h1	v/1	1ULX
93	CXOJ112112.727+531045.55	1	NGC3631-X6	1.576	0.65	21.6	1/1	2.28e+39	4.08e-14	1	70.539	412.279	h1		1ULX
93	CXOJ112126.741+530749.51	1	NGC3631-X3	4.363	1.79	21.6	1/1	4.15e+39	7.41e-14	1	113.729	667.077	h1		pm* +v 2ULX
96	CXOJ034012.451-353740.48	1.01	NGC1427A-X1	0.709	0.83	16.9	1/1	5.76e+39	1.68e-13	1	234.046	1221.934	h1		+v 1ULX
97	CXOJ120807.464+651028.60	1.02	NGC4125-X1	0.113	0.07	23.88	1/1	1.03e+40	1.50e-13	1	128.762	1151.643	h1		1EULX
97	CXOJ120859.040+651010.20	1	NGC4125-X3	5.446	1.90	23.88	1/1	2.5e+39	3.65e-14	1	40.095	189.808	h1		pm* +v 2ULX
99	CXOJ225710.867-362744.71	1	IC1459-X2	0.074	0.03	29.24	1/1	3.86e+39	3.76e-14	1	30.376	282.086	h1		1ULX
99	CXOJ225720.722-362747.45	1	IC1459-X3	2.054	0.98	29.24	1/1	2.55e+39	2.49e-14	1	47.770	184.551	h1		1ULX
100	CXOJ233610.082+020900.50	1.08	NGC7714-X3	1.188	1.66	36.9	1/1	2.99e+40	1.83e-13	1	226.575	1104.728	h1		2EULX
100	CXOJ233615.624+020923.44	1.11	NGC7714-X2	0.248	0.34	36.9	1/1	7.96e+40	4.87e-13	1	457.490	2810.301	h1		1EULX
102	CXOJ124155.565+323216.91	1.09	NGC4627-X1	2.368	1.88	7.2	1/1	2.33e+39	3.74e-13	1	443.801	3284.771	h1		2ULX
102	CXOJ124155.565+323216.91	1.09	NGC4631-X1	2.564	0.33	6.9	1/1	2.14e+39	3.74e-13	1	443.801	3284.771	h1		1ULX
103	CXOJ145339.943+033418.41	1	NGC5774-X2	0.977	0.79	26.8	1/1	3.94e+39	4.57e-14	1	51.661	190.525	h1	v/1	1ULX
103	CXOJ145344.693+033330.17	1	NGC5774-X1	1.475	1.00	26.8	1/1	1.13e+40	1.31e-13	1	151.545	818.388	h1		q pm* +rv 1EULX
103	CXOJ145355.243+033228.64	1	NGC5775-X5	0.641	1.23	26.7	1/1	2.02e+39	2.36e-14	1	47.056	156.355	h1		2ULX
103	CXOJ145355.754+033327.47	1	NGC5775-X4	0.928	0.45	26.7	1/1	3.06e+39	3.58e-14	1	68.399	236.696	h1		pm* +iv 1ULX
103	CXOJ145355.908+033400.19	1.01	NGC5775-X2	1.409	1.00	26.7	1/1	4.21e+39	4.92e-14	1	92.054	324.380	h1		+v 1ULX
103	CXOJ145358.894+033216.19	1.1	NGC5775-X1	0.496	0.24	26.7	1/1	1.77e+40	2.07e-13	1	257.106	1375.817	h1		1EULX
103	CXOJ145359.446+033156.68	1.01	NGC5775-X3	0.843	0.41	26.7	1/1	3.86e+39	4.51e-14	1	76.112	299.162	h1		pm* +iv 1ULX
104	CXOJ114911.938+560509.56	1	NGC3898-X2	0.499	0.23	21.9	1/1	2.28e+39	3.96e-14	1	73.351	263.061	h1	v/1	1ULX
106	CXOJ225726.777-432647.44	1	IC5267-X1	3.893	1.49	21.0	1/1	4.34e+39	8.21e-14	1	92.117	439.527	h1		2ULX
109	CXOJ034211.995-352209.91	1	NGC1427-X2	2.112	1.57	23.55	1/1	2.16e+39	3.24e-14	1	47.839	182.792	h1		pm* +v 2ULX
109	CXOJ034218.706-352239.97	1	NGC1427-X1	0.951	0.77	23.55	1/1	2.74e+39	4.11e-14	1	61.023	233.739	h1		GC 1ULX
111	CXOJ094547.880-142201.52	1	NGC2993-X3	0.167	0.32	30.5	1/1	9.32e+39	8.35e-14	1	60.950	437.569	h1		1ULX
111	CXOJ094548.185-142206.53	1	NGC2993-X2	0.058	0.12	30.5	1/1	1.19e+40	1.07e-13	1	52.340	559.033	h1		PM* +iv 1EULX
111	CXOJ094550.462-142138.41	1	NGC2993-X4	0.702	1.31	30.5	1/1	7.13e+39	6.39e-14	1	85.520	339.902	h1		2ULX
112	CXOJ220207.903-315920.80	1	NGC7174-X2	0.297	0.33	35.5	1/1	3.55e+39	2.35e-14	1	18.543	56.549	h1	v/1	1ULX
112	CXOJ220207.903-315920.80	1	NGC7176-X2	0.184	0.47	32.3	1/1	2.94e+39	2.35e-14	1	18.543	56.549	h1	v/1	1ULX
112	CXOJ220208.453-315923.35	1	NGC7174-X1	0.387	0.36	35.5	1/1	3.86e+39	2.55e-14	1	18.536	84.923	h1		+i 1ULX
112	CXOJ220208.453-315923.35	1	NGC7176-X1	0.060	0.15	32.3	1/1	3.19e+39	2.55e-14	1	18.536	84.923	h1		+i 1ULX
112	CXOJ220244.654-315951.54	2.68	PGC67910-X1	0.526	1.97	30.9	1/1	2.92e+39	2.55e-14	1	12.133	71.117	h1		2ULX
113	CXOJ012433.502+034748.52	1	NGC520-X2	0.299	0.24	27.8	1/1	7.69e+39	8.29e-14	1	98.323	444.364	h1		1ULX
113	CXOJ012435.186+034731.16	1.04	NGC520-X1	0.321	0.21	27.8	1/1	1.78e+40	1.92e-13	1	151.036	1083.624	h1		1EULX
116	CXOJ130521.943-492826.65	1.28	NGC4945-X1	0.719	0.21	5.2	1/1	2.14e+39	6.58e-13	1	233.908	3086.068	h1		1ULX
117	CXOJ235751.005-323726.72	1	NGC7793-X1	2.070	0.64	3.7	1/1	2.38e+39	1.45e-12	1	564.505	8152.086	h1		1ULX
118	CXOJ034008.911-183447.89	1	NGC1407-X7	0.830	0.38	28.84	1/1	2.13e+39	2.13e-14	1	24.601	116.727	h1		1ULX
118	CXOJ034011.642-183456.78	1	NGC1407-X6	0.197	0.09	28.84	1/1	2.49e+39	2.49e-14	1	16.110	145.373	h1		1ULX
118	CXOJ034012.516-183451.60	1	NGC1407-X5	0.028	0.01	28.84	1/1	2.56e+39	2.56e-14	1	18.618	149.405	h1		1ULX

Table 5—Continued

Group No.	CXOJ[a]	Pos. Err.[b]	source Name[c]	α[d] (′)	r_{25}[e]	Dis.[f] (Mpc)	V/D[g]	L_{Xmax}[h] (erg/s)	F_{Xavg}[i] (cgs)	F/F[j]	σ_{max}[k]	C_{max}[l]	SQH[m]	Var/KS[n]	Notes[o]
118	CXOJ034014.518-183637.80	1	NGC1407-X3	1.833	0.83	28.84	1/1	3.23e+39	3.24e-14	1	48.293	177.583	h1		1ULX
118	CXOJ034018.264-183601.66	1	NGC1407-X4	1.810	0.85	28.84	1/1	2.65e+39	2.66e-14	1	43.900	153.515	h1		1ULX
118	CXOJ034027.874-183427.01	1	NGC1407-X2	3.690	1.68	28.84	1/1	3.28e+39	3.29e-14	1	45.493	175.574	h1		q pm* +rv 2ULX
119	CXOJ150104.927+014136.02	1	NGC5813-X4	1.656	1.08	32.21	1/1	3.86e+39	3.10e-14	1	31.789	165.941	h1		+v 2ULX
119	CXOJ150105.592+014330.76	1	NGC5813-X9	1.967	0.96	32.21	1/1	3.04e+39	2.44e-14	1	29.972	131.317	h1		1ULX
119	CXOJ150109.329+013900.72	1	NGC5813-X8	3.156	1.81	32.21	1/1	3.08e+39	2.47e-14	1	26.373	129.469	h1		2ULX
119	CXOJ150109.660+013911.63	1	NGC5813-X3	2.965	1.69	32.21	1/1	3.97e+39	3.19e-14	1	46.163	167.656	q1		PM* +iv 2ULX
119	CXOJ150110.877+014142.65	1	NGC5813-X7	0.430	0.25	32.21	1/1	3.27e+39	2.63e-14	1	15.525	142.675	h1		1ULX
119	CXOJ150111.491+014202.74	1	NGC5813-X5	0.114	0.05	32.21	1/1	3.85e+39	3.09e-14	1	12.686	167.954	q1		1ULX
119	CXOJ150111.645+014207.42	1	NGC5813-X6	0.111	0.07	32.21	1/1	3.64e+39	2.92e-14	1	11.988	158.793	q1		1ULX
119	CXOJ150116.555+014133.97	1	NGC5813-X1	1.453	0.78	32.21	1/1	1.9e+40	1.53e-13	1	126.464	820.621	h1		1EULX
119	CXOJ150118.418+013836.82	1.19	NGC5814-X2	0.809	1.85	141.1	1/1	3.34e+40	1.40e-14	1	13.396	72.971	h1		2EULX
119	CXOJ150123.210+013824.04	1.51	NGC5814-X3	0.541	1.81	141.1	1/1	2.32e+40	9.73e-15	1	9.337	49.368	h1		+v 2EULX
120	CXOJ103843.308+533101.67	1.01	NGC3310-X3	0.986	0.67	18.7	1/1	7.64e+39	1.82e-13	1	209.470	1056.402	h1		1ULX
120	CXOJ103844.477+533004.75	1.01	NGC3310-X10	0.247	0.20	18.7	1/1	2.6e+39	6.20e-14	1	41.013	361.635	h1		1ULX
120	CXOJ103844.621+533007.63	1.01	NGC3310-X9	0.220	0.18	18.7	1/1	2.61e+39	6.21e-14	1	35.210	351.869	h1		1ULX
120	CXOJ103844.818+533003.74	1.03	NGC3310-X4	0.203	0.17	18.7	1/1	7.05e+39	1.68e-13	1	65.525	977.880	h1		+rv 1ULX
120	CXOJ103845.996+533004.46	1.05	NGC3310-X2	0.061	0.04	18.7	1/1	9.82e+39	2.34e-13	1	92.808	1362.564	h1		pm* +iv 1ULX
120	CXOJ103846.574+533038.09	1	NGC3310-X8	0.506	0.33	18.7	1/1	2.61e+39	6.21e-14	1	55.636	347.272	h1		1ULX
120	CXOJ103846.690+533013.39	1.02	NGC3310-X6	0.126	0.09	18.7	1/1	5.29e+39	1.26e-13	1	54.913	738.008	h1		1ULX
120	CXOJ103847.268+533027.86	1.02	NGC3310-X5	0.374	0.26	18.7	1/1	6.71e+39	1.60e-13	1	110.264	926.017	h1		1ULX
120	CXOJ103850.208+532925.55	1.05	NGC3310-X7	0.935	0.68	18.7	1/1	5.25e+39	1.25e-13	1	158.417	726.874	h1		1ULX
123	CXOJ072524.881+854418.46	1	NGC2276-X4	2.245	1.63	36.8	1/1	7.15e+39	4.40e-14	1	58.203	200.752	s1		PM*F8 +iv 2ULX
123	CXOJ072559.786+854356.42	1	NGC2276-X6	1.941	1.39	36.8	1/1	2.8e+39	1.72e-14	1	27.148	79.089	h1		2ULX
123	CXOJ072637.476+854534.49	1.02	NGC2276-X1	0.693	0.51	36.8	1/1	1.54e+40	9.50e-14	1	96.130	437.164	h1		1EULX
123	CXOJ072647.856+854552.34	1	NGC2276-X3	0.707	0.52	36.8	1/1	7.44e+39	4.58e-14	1	48.162	210.402	h1		1ULX
123	CXOJ072648.168+854554.86	1.01	NGC2276-X2	0.736	0.54	36.8	1/1	1.32e+40	8.13e-14	1	74.286	373.524	h1		1EULX
123	CXOJ072648.250+854549.10	1	NGC2276-X5	0.662	0.49	36.8	1/1	4.19e+39	2.58e-14	1	26.664	118.808	h1		PM* +v 1ULX
123	CXOJ072725.769+854525.78	1	NGC2276-X8	0.262	0.19	36.8	1/1	2.47e+39	1.52e-14	1	19.412	69.967	q1		1ULX
123	CXOJ072921.310+854502.84	1	NGC2276-X7	2.400	1.77	36.8	1/1	2.47e+39	1.52e-14	1	18.451	44.723	h1		2ULX
123	CXOJ072921.958+854541.62	1	NGC2276-X9	2.419	1.77	36.8	1/1	2.19e+39	1.35e-14	1	5.070	10.572	h1		2ULX
124	CXOJ123409.581+074223.04	1.01	NGC4526-X2	1.695	0.90	16.90	1/1	2.15e+39	6.26e-14	1	89.069	310.566	h1		1ULX
125	CXOJ050742.182-373045.94	1.03	NGC1808-X2	0.149	0.05	10.8	1/1	2.84e+39	2.03e-13	1	82.833	1026.078	h1		1ULX
126	CXOJ122517.172+181346.52	1	NGC4382-X1	2.933	0.92	18.45	1/1	5.23e+39	1.28e-13	1	112.906	492.450	h1		pm* +v 1ULX
127	CXOJ044531.608-591454.64	1.07	NGC1672-X2	1.354	0.49	14.5	1/1	5.25e+39	2.08e-13	1	210.485	991.000	h1		1ULX
127	CXOJ044533.977-591441.96	1.04	NGC1672-X3	1.081	0.38	14.5	1/1	4.31e+39	1.71e-13	1	175.357	817.347	h1		1ULX
127	CXOJ044542.082-591452.01	1	NGC1672-X4	0.085	0.03	14.5	1/1	2.62e+39	1.04e-13	1	51.189	500.652	h1		HII 1ULX
127	CXOJ044552.836-591456.11	1.12	NGC1672-X1	1.360	0.49	14.5	1/1	7.17e+39	2.84e-13	1	264.144	1360.522	h1		pm* HII +v 1ULX
131	CXOJ231442.209+043140.12	1	NGC7541-X1	0.455	0.72	33.4	1/1	7.32e+39	5.47e-14	1	60.808	232.754	h1		+v 1ULX
131	CXOJ231442.389+043230.98	1	NGC7541-X2	0.484	0.68	33.4	1/1	3.76e+39	2.81e-14	1	37.879	119.147	h1		1ULX
133	CXOJ111702.966+180101.45	1.28	NGC3607-X1	3.029	1.37	22.80	1/1	2.15e+39	3.45e-14	1	20.665	72.467	h1		2ULX
135	CXOJ124336.502+113009.18	1	NGC4649-X2	2.964	0.98	16.83	1/1	1.16e+40	3.42e-13	1	128.536	452.401	h1		pm* +v 1EULX
135	CXOJ124408.916+113333.08	1	NGC4649-X3	7.033	1.95	16.83	1/1	6.08e+39	1.79e-13	1	50.898	604.461	h1		q +rv 2ULX
136	CXOJ122254.775+154916.14	1.02	NGC4321-X1	0.154	0.04	14.13	1/1	2.18e+39	9.08e-14	1	50.800	410.588	h1	v/1	1ULX
137	CXOJ110947.179-373032.54	1.49	NGC3557-X6	2.687	1.80	45.71	1/1	3.96e+39	1.58e-14	1	9.996	29.818	h1		2ULX
137	CXOJ110947.760-373154.34	1.35	NGC3557-X11	1.968	1.30	45.71	1/1	2.73e+39	1.09e-14	1	6.052	13.311	h1		pm* +v 2ULX
137	CXOJ110952.709-373545.42	1.22	NGC3557-X9	3.601	1.82	45.71	1/1	2.93e+39	1.17e-14	1	9.426	25.015	h1		2ULX
137	CXOJ110954.170-373604.72	1	NGC3557-X2	3.852	1.99	45.71	1/1	1.45e+40	5.80e-14	1	38.734	123.914	h1		pm* +v 2EULX
137	CXOJ110956.162-373404.22	1.02	NGC3557-X14	1.806	0.94	45.71	1/1	2.05e+39	8.18e-15	1	8.034	18.161	h1		1ULX
137	CXOJ110956.928-373455.31	1.04	NGC3557-X13	2.641	1.41	45.71	1/1	2.16e+39	8.62e-15	1	7.119	16.873	h1		2ULX

Table 5—Continued

Group No.	CXOJ[a]	Pos.[b] Err.	source[c] Name	α[d] ($'$)	r_{25}[e]	Dis.[f] (Mpc)	V/D[g]	L_{Xmax}[h] (erg/s)	F_{Xavg}[i] (cgs)	F/F[j]	σ_{max}[k]	C_{max}[l]	SQH[m]	Var/KS[n]	Notes[o]
137	CXOJ110957.744-372917.20	1.23	NGC3557-X5	2.998	1.62	45.71	1/1	4.44e+39	1.77e-14	1	12.104	37.387	h1		2ULX
137	CXOJ110959.047-373531.49	1.04	NGC3557-X12	3.256	1.82	45.71	1/1	2.19e+39	8.74e-15	1	9.013	19.417	h1		2ULX
137	CXOJ110959.616-373028.44	1.03	NGC3557-X4	1.857	0.94	45.71	1/1	5.94e+39	2.37e-14	1	20.461	52.325	h1		pm* +v 1ULX
137	CXOJ110959.971-373047.99	1	NGC3557-X3	1.563	0.78	45.71	1/1	1.37e+40	5.47e-14	1	44.052	121.647	h1		1EULX
137	CXOJ111000.876-373354.32	1	NGC3557-X8	1.754	1.08	45.71	1/1	3.18e+39	1.27e-14	1	12.449	28.985	h1		2ULX
137	CXOJ111006.900-373209.06	1	NGC3557-X10	1.868	1.16	45.71	1/1	2.81e+39	1.12e-14	1	11.545	24.492	h1		2ULX
137	CXOJ111011.057-372932.24	1.06	NGC3557-X7	3.843	1.94	45.71	1/1	3.71e+39	1.48e-14	1	11.291	24.402	h1		2ULX
143	CXOJ121911.645+054728.68	1	NGC4261-X2	3.493	1.90	31.62	1/1	4.2e+39	3.50e-14	1	40.619	117.196	h1	v/1	pm* +v 2ULX
143	CXOJ121923.530+054935.98	1	NGC4261-X3	0.181	0.10	31.62	1/1	2.4e+39	2.00e-14	1	10.860	99.352	h1		1ULX
145	CXOJ041602.712-554656.17	1	NGC1553-X2	1.084	0.73	18.54	1/1	2.11e+39	5.12e-14	1	44.782	242.297	h1		1ULX
146	CXOJ132935.736-175542.67	1	NGC5170-X1	3.887	0.95	33.7	1/1	2.9e+40	2.13e-13	1	119.581	474.920	h1		1EULX
146	CXOJ132941.734-175651.86	1	NGC5170-X3	2.059	0.57	33.7	1/1	1.94e+40	1.42e-13	1	120.848	351.119	h1		1EULX
146	CXOJ132948.850-175640.02	1	NGC5170-X5	1.317	2.03	33.7	1/1	2.41e+39	1.77e-14	1	17.068	35.574	h1		2ULX
146	CXOJ132953.606-175916.37	1	NGC5170-X4	1.692	0.83	33.7	1/1	4.59e+39	3.37e-14	1	25.885	59.103	q1		1ULX
146	CXOJ132956.916-175903.12	1	NGC5170-X2	2.165	0.75	33.7	1/1	2.06e+40	1.51e-13	1	101.323	280.619	h1		1EULX
146	CXOJ133001.279-180018.58	1.07	NGC5170-X6	3.733	0.92	33.7	1/1	2.3e+39	1.69e-14	1	13.080	30.064	h1		+v 1ULX
148	CXOJ124825.870+083020.77	1.03	NGC4698-X2	1.228	0.79	16.8	1/1	6.57e+39	1.94e-13	1	183.885	711.517	h1		q pm* +rv 1ULX
148	CXOJ124828.459+083112.76	1	NGC4698-X1	2.300	1.52	16.8	1/1	9.99e+39	2.95e-13	1	218.462	1068.606	h1		q pm* +riv 2ULX
149	CXOJ032200.936-371917.08	1	NGC1316-X3	10.580	1.76	21.48	1/1	5.06e+39	9.14e-14	1	19.722	186.896	h1		pm* +iv 2ULX
149	CXOJ032225.730-370912.06	1	NGC1316-X6	4.545	1.07	21.48	1/1	2.93e+39	5.29e-14	1	33.864	177.707	s1		pm* +v 2ULX
149	CXOJ032241.126-371234.99	1	NGC1316-X5	0.150	0.03	21.48	1/1	3.44e+39	6.22e-14	1	21.779	230.183	h1		1ULX
149	CXOJ032251.247-370949.10	1	NGC1316-X4	3.272	0.56	21.48	1/1	4.28e+39	7.73e-14	1	49.070	277.987	h1		1ULX
150	CXOJ071629.947-291820.23	1	PGC20551-X2	1.103	1.42	24.0	1/1	2.46e+39	3.56e-14	1	31.295	76.650	h1		2ULX
152	CXOJ091356.974+400904.21	1	NGC2782-X10	2.740	1.80	37.3	1/1	3.11e+39	1.86e-14	1	22.546	57.365	s1		+v 2ULX
152	CXOJ091359.184+400535.63	1	NGC2782-X9	1.755	1.20	37.3	1/1	3.14e+39	1.88e-14	1	26.181	61.890	h1		+v 2ULX
152	CXOJ091404.032+400354.14	1	NGC2782-X6	2.977	1.73	37.3	1/1	4.27e+39	2.56e-14	1	28.673	66.051	h1		2ULX
152	CXOJ091404.260+400738.06	1	NGC2782-X7	0.804	0.48	37.3	1/1	3.67e+39	2.20e-14	1	27.953	73.137	h1	v/1	+v 1ULX
152	CXOJ091405.112+400643.06	1	NGC2782-X4	0.166	0.10	37.3	1/1	5.79e+39	3.47e-14	1	21.604	114.328	h1		HII 1ULX
152	CXOJ091405.258+400642.26	1	NGC2782-X2	0.169	0.10	37.3	1/1	6.16e+39	3.69e-14	1	21.808	118.921	q1		1ULX
152	CXOJ091405.335+400628.48	1	NGC2782-X8	0.393	0.23	37.3	1/1	3.29e+39	1.97e-14	1	16.730	62.323	h1		1ULX
152	CXOJ091405.414+400651.98	1	NGC2782-X11	0.017	0.01	37.3	1/1	3.01e+39	1.80e-14	1	10.419	60.055	h1		z +r 1ULX
152	CXOJ091408.376+400530.77	1	NGC2782-X3	1.461	0.89	37.3	1/1	5.98e+39	3.58e-14	1	45.691	118.230	h1		+v 1ULX
152	CXOJ091410.106+400619.76	1	NGC2782-X12	1.032	0.75	37.3	1/1	2.44e+39	1.46e-14	1	18.569	46.489	h1		1ULX
152	CXOJ091416.872+400659.36	1	NGC2782-X5	2.177	1.70	37.3	1/1	4.29e+39	2.57e-14	1	31.184	82.990	h1		2ULX
153	CXOJ122958.284+132526.11	1	NGC4473-X1	2.338	1.05	15.70	1/1	2.14e+39	7.22e-14	1	76.893	251.588	h1		pm* +v 2ULX
154	CXOJ092335.102-231019.88	1	NGC2865-X2	1.123	1.17	37.84	1/1	2.87e+39	1.67e-14	1	21.907	56.287	q1		2ULX
159	CXOJ100202.875+553858.74	1	NGC3079-X1	1.859	0.53	17.3	1/1	3.91e+39	1.09e-13	1	117.632	356.622	h1		1ULX
160	CXOJ122757.209+130232.82	1	NGC4438-X2	3.454	1.27	16.8	1/1	1.13e+40	3.35e-13	1	87.621	293.243	h1		q pm* +riv 2EULX
163	CXOJ200942.811-482157.49	1	NGC6868-X3	1.990	1.19	35.5	1/1	6.46e+39	4.27e-14	1	29.055	66.122	h1		2ULX
163	CXOJ200943.106-482105.15	1	NGC6868-X4	2.435	1.57	35.5	1/1	5.2e+39	3.44e-14	1	23.106	53.966	h1		+v 2ULX
163	CXOJ200954.934-482400.97	1	NGC6868-X2	1.280	0.91	35.5	1/1	9.62e+39	6.36e-14	1	33.628	91.762	h1		1ULX
163	CXOJ200957.262-481648.86	1.17	NGC6870-X3	2.243	1.91	35.5	1/1	2.89e+39	1.91e-14	1	11.870	27.103	h1		+v 2ULX
163	CXOJ201012.854-481659.09	1.47	NGC6870-X4	0.463	0.46	35.5	1/1	2.57e+39	1.70e-14	1	8.067	22.534	h1		1ULX
163	CXOJ201024.358-481642.24	2.08	NGC6870-X2	2.365	1.85	35.5	1/1	5.1e+39	3.37e-14	1	11.243	40.826	h1		+v 2ULX
164	CXOJ200732.846-482318.74	1	NGC6861-X2	2.525	1.99	28.05	1/1	3.69e+39	3.91e-14	1	15.890	34.394	h1		+v 2ULX
165	CXOJ115044.539-284846.76	1	NGC3923-X3	3.867	1.56	22.91	1/1	2.7e+39	4.28e-14	1	30.135	80.911	h1		2ULX
165	CXOJ115106.230-284649.84	1	NGC3923-X2	1.797	0.66	22.91	1/1	4.99e+39	7.93e-14	1	59.499	172.164	h1		1ULX
166	CXOJ131521.941-162327.92	1	NGC5044-X2	0.587	0.40	31.19	1/1	3.42e+39	2.93e-14	1	6.573	67.846	h1		1ULX
166	CXOJ131531.358-162511.57	1	NGC5044-X3	2.699	1.82	31.19	1/1	2.71e+39	2.32e-14	1	10.112	52.870	h1		2ULX
170	CXOJ115357.792-231002.46	1	NGC3955-X1	0.143	0.16	20.6	1/1	5.45e+39	1.07e-13	1	67.706	209.372	h1		1ULX

Table 5—Continued

Group No.	CXOJ[a]	Pos.[b] Err.	source[c] Name	α[d] ($\prime$)	r_{25}[e]	Dis.[f] (Mpc)	V/D[g]	L_{Xmax}[h] (erg/s)	F_{Xavg}[i] (cgs)	F/F[j]	σ_{max}[k]	C_{max}[l]	SQH[m]	Var/KS[n]	Notes[o]
171	CXOJ223555.699+335738.77	1	NGC7318A-X1	0.406	0.95	88.4	1/1	2.44e+40	2.60e-14	1	21.337	62.100	h1		+v 1EULX
171	CXOJ223555.699+335738.77	1	NGC7318B-X2	0.662	1.02	77.0	1/1	1.85e+40	2.60e-14	1	21.337	62.100	h1		+v 2EULX
171	CXOJ223556.678+335756.16	1	NGC7318A-X2	0.054	0.13	88.4	1/1	1.91e+40	2.04e-14	1	14.321	48.915	h1		+iv 1EULX
171	CXOJ223556.678+335756.16	1	NGC7318B-X3	0.379	0.63	77.0	1/1	1.45e+40	2.04e-14	1	14.321	48.915	h1		+iv 1EULX
171	CXOJ223557.382+335818.80	1	NGC7318A-X6	0.352	0.82	88.4	1/1	3.38e+39	3.60e-15	1	3.543	8.662	d1		1ULX
171	CXOJ223557.382+335818.80	1	NGC7318B-X9	0.416	0.53	77.0	1/1	2.56e+39	3.60e-15	1	3.543	8.662	d1		1ULX
171	CXOJ223557.605+335859.84	1	NGC7318B-X5	1.047	1.13	77.0	1/1	8.11e+39	1.14e-14	1	8.994	26.123	h1		2ULX
171	CXOJ223557.605+335859.84	1	NGC7319-X3	1.316	2.04	90.0	1/1	1.11e+40	1.14e-14	1	8.994	26.123	h1		2EULX
171	CXOJ223559.465+335803.90	1	NGC7318A-X3	0.559	1.30	88.4	1/1	6.77e+39	7.22e-15	1	4.666	17.356	s1		PM* +v 2ULX
171	CXOJ223559.465+335803.90	1	NGC7318B-X6	0.224	0.35	77.0	1/1	5.14e+39	7.22e-15	1	4.666	17.356	s1		PM* +v 1ULX
171	CXOJ223559.465+335803.90	1	NGC7319-X5	0.994	1.49	90.0	1/1	7.02e+39	7.22e-15	1	4.666	17.356	s1		PM* +v 2ULX
171	CXOJ223559.669+335733.91	1	NGC7318A-X4	0.728	1.69	88.4	1/1	6.04e+39	6.44e-15	1	4.668	15.433	q1		2ULX
171	CXOJ223559.669+335733.91	1	NGC7318B-X7	0.469	0.59	77.0	1/1	4.58e+39	6.44e-15	1	4.668	15.433	q1		1ULX
171	CXOJ223559.669+335733.91	1	NGC7319-X6	1.292	1.77	90.0	1/1	6.26e+39	6.44e-15	1	4.668	15.433	q1		2ULX
171	CXOJ223600.749+335801.56	1	NGC7318A-X5	0.820	1.91	88.4	1/1	3.98e+39	4.24e-15	1	3.932	10.205	h1		2ULX
171	CXOJ223600.749+335801.56	1	NGC7318B-X8	0.470	0.78	77.0	1/1	3.02e+39	4.24e-15	1	3.932	10.205	h1		1ULX
171	CXOJ223600.749+335801.56	1	NGC7319-X9	0.802	1.14	90.0	1/1	4.12e+39	4.24e-15	1	3.932	10.205	h1		2ULX
171	CXOJ223603.660+335824.92	1	NGC7318B-X4	1.161	1.85	77.0	1/1	1.1e+40	1.55e-14	1	12.043	37.338	h1		q 2EULX
171	CXOJ223603.660+335824.92	1	NGC7319-X2	0.152	0.18	90.0	1/1	1.51e+40	1.55e-14	1	12.043	37.338	h1		q 1EULX
171	CXOJ223604.826+335901.36	1	NGC7319-X7	0.522	0.68	90.0	1/1	5.78e+39	5.95e-15	1	5.633	14.353	h1		1ULX
171	CXOJ223607.051+335829.39	1	NGC7319-X4	0.719	1.14	90.0	1/1	8.08e+39	8.31e-15	1	8.297	19.821	h1		2ULX
173	CXOJ104947.410+330026.32	1	NGC3396-X1	2.114	1.79	21.8	1/1	9.69e+39	1.70e-13	1	114.412	437.763	h1		q pm* +rv 2ULX
173	CXOJ104949.428+325827.98	1	NGC3395-X3	0.384	0.53	27.4	1/1	2.23e+39	2.47e-14	1	18.312	63.626	h1		1ULX
173	CXOJ104949.786+325838.50	1	NGC3395-X1	0.217	0.34	27.4	1/1	4.08e+39	4.53e-14	1	29.527	116.978	h1	v/1	1ULX
173	CXOJ104949.786+325838.50	1	NGC3396-X2	1.510	1.77	21.8	1/1	2.58e+39	4.53e-14	1	29.527	116.978	h1	v/1	2ULX
173	CXOJ104951.151+325833.82	1	NGC3395-X4	0.450	0.73	27.4	1/1	2.01e+39	2.23e-14	1	15.898	57.803	h1		1ULX
173	CXOJ104952.181+325903.91	1	NGC3395-X2	0.602	0.64	27.4	1/1	3.88e+39	4.31e-14	1	28.300	93.450	h1		1ULX
173	CXOJ104952.181+325903.91	1	NGC3396-X3	0.875	0.89	21.8	1/1	2.46e+39	4.31e-14	1	28.300	93.450	h1		1ULX
174	CXOJ233941.340-121751.79	1.06	NGC7727-X3	3.058	1.72	23.3	1/1	2.38e+39	3.65e-14	1	26.062	77.808	h1		+v 2ULX
174	CXOJ233953.676-121731.20	1	NGC7727-X2	0.085	0.04	23.3	1/1	2.51e+39	3.85e-14	1	21.333	73.720	h1		1ULX
174	CXOJ233955.836-121953.33	1	NGC7727-X1	2.342	1.02	23.3	1/1	4.47e+39	6.86e-14	1	58.837	156.022	h1		pm* +v 2ULX
177	CXOJ112441.230+384357.07	1	NGC3665-X3	1.876	1.56	32.4	1/1	2.34e+39	1.86e-14	1	5.421	10.775	q1		2ULX
177	CXOJ112443.116+384737.46	1	NGC3665-X2	1.841	1.58	32.4	1/1	2.38e+39	1.89e-14	1	10.150	20.675	h1		2ULX
177	CXOJ112445.007+384623.27	1	NGC3665-X4	0.690	0.56	32.4	1/1	2.14e+39	1.70e-14	1	10.066	21.467	h1		1ULX
179	CXOJ234420.083+095548.54	1	NGC7743-X2	0.453	0.31	20.70	1/1	2.6e+39	5.05e-14	1	32.018	83.195	h1		1ULX
182	CXOJ134859.458+601457.98	1	NGC5322-X1	4.018	1.87	31.19	1/1	1.75e+40	1.50e-13	1	60.580	266.227	h1		pm* +v 2EULX
185	CXOJ011955.272+032959.86	1	NGC474-X1	5.766	1.81	32.5	1/1	2.45e+40	1.93e-13	1	56.959	210.485	h1		pm* +v 2EULX
185	CXOJ012008.741+032057.19	1.1	NGC474-X2	4.076	1.29	32.5	1/1	8.34e+39	6.58e-14	1	22.220	98.855	h1		pm* +v 2ULX
190	CXOJ150527.511+020654.54	1	NGC5838-X1	0.921	0.71	28.5	1/1	1.24e+40	1.27e-13	1	75.092	217.170	h1	v/1	1EULX
192	CXOJ033515.334-245404.61	1.02	NGC1371-X2	3.869	1.96	23.4	1/1	2.8e+39	4.26e-14	1	26.045	70.797	h1		2ULX
193	CXOJ133013.294+464021.29	1	NGC5198-X1	0.321	0.36	39.0	1/1	4.71e+39	2.58e-14	1	18.436	44.718	h1		1ULX
195	CXOJ124812.802-031956.86	1	NGC4691-X2	0.177	0.13	22.5	1/1	2.8e+39	4.61e-14	1	14.174	58.131	h1		1ULX
195	CXOJ124816.164-031943.86	1	NGC4691-X3	0.712	0.51	22.5	1/1	2.04e+39	3.36e-14	1	19.399	42.350	h1		1ULX
197	CXOJ024013.027+390051.84	1	NGC1023-X1	3.613	1.97	11.43	1/1	4e+39	2.55e-13	1	83.318	250.713	s1		PM*G5 +iv 2ULX
202	CXOJ110545.626+000016.45	1	NGC3521-X1	2.653	0.48	11.5	1/1	3.05e+39	1.92e-13	1	76.356	206.830	h1		1ULX
205	CXOJ102723.995+282836.19	1	NGC3245-X1	2.259	1.76	20.89	1/1	6.55e+39	1.25e-13	1	62.154	144.974	h1		2ULX
206	CXOJ140323.758-060442.13	1.03	NGC5426-X3	0.619	0.47	35.9	1/1	6.39e+39	4.13e-14	1	19.039	47.513	h1		+v 1ULX
206	CXOJ140323.858-060429.64	1	NGC5426-X1	0.433	0.37	35.9	1/1	2.81e+40	1.82e-13	1	69.550	209.690	h1		pm* +iv 1EULX
206	CXOJ140323.858-060429.64	1	NGC5427-X1	2.669	1.91	38.1	1/1	3.17e+40	1.82e-13	1	69.550	209.690	h1		pm* +iv 2EULX
206	CXOJ140324.526-060120.71	1	NGC5426-X6	2.824	2.01	35.9	1/1	2.47e+39	1.60e-14	1	9.687	18.854	h1		2ULX

Table 5—Continued

Group No.	CXOJ[a]	Pos.[b] Err.	source[c] Name	α[d] ($\prime$)	r_{25}[e]	Dis.[f] (Mpc)	V/D[g]	$L_{X max}$[h] (erg/s)	$F_{X avg}$[i] (cgs)	F/F[j]	σ_{max}[k]	C_{max}[l]	SQH[m]	Var/KS[n]	Notes[o]
206	CXOJ140324.526-060120.71	1	NGC5427-X4	0.665	0.50	38.1	1/1	2.79e+39	1.60e-14	1	9.687	18.854	h1		1ULX
206	CXOJ140324.653-060244.09	1	NGC5426-X2	1.434	1.03	35.9	1/1	6.88e+39	4.45e-14	1	24.277	52.407	h1		2ULX
206	CXOJ140324.653-060244.09	1	NGC5427-X2	0.924	0.67	38.1	1/1	7.75e+39	4.45e-14	1	24.277	52.407	h1		1ULX
206	CXOJ140326.302-060513.38	1.09	NGC5426-X5	1.105	0.91	35.9	1/1	4.31e+39	2.79e-14	1	12.085	32.027	h1		1ULX
208	CXOJ233718.156+002552.21	2.88	PGC71926-X2	2.716	1.80	35.1	1/1	7.04e+39	4.76e-14	1	7.828	20.943	h1		q pm* +iv;q 2ULX
208	CXOJ233718.650+002607.01	3.26	PGC71926-X4	2.872	1.93	35.1	1/1	2.37e+39	1.60e-14	1	2.826	7.274	d1		q pm* +v 2ULX
208	CXOJ233722.032+002239.58	1.25	PGC71926-X3	0.994	0.91	35.1	1/1	2.78e+39	1.88e-14	1	4.546	8.852	d1		q pm* +v 1ULX
208	CXOJ233726.086+002255.06	1.11	PGC71926-X1	0.853	0.57	35.1	1/1	7.97e+39	5.39e-14	1	15.636	32.576	h1		1ULX
210	CXOJ112115.024+031557.31	1	NGC3640-X1	2.745	1.61	27.04	1/1	2.41e+39	2.75e-14	1	11.265	24.392	h1		q pm* +rv 2ULX
212	CXOJ095821.878-265417.42	1	NGC3078-X2	1.404	1.15	35.16	1/1	4.73e+39	3.19e-14	1	8.888	17.755	h1		2ULX
212	CXOJ095824.101-265523.66	1	NGC3078-X3	0.194	0.16	35.16	1/1	3.25e+39	2.19e-14	1	5.914	12.507	h1		1ULX
212	CXOJ095831.030-265626.09	1	NGC3078-X4	1.694	1.54	35.16	1/1	2.27e+39	1.53e-14	1	4.555	8.858	d1		2ULX
214	CXOJ143242.269-440939.13	1	NGC5643-X1	0.764	0.34	16.9	1/1	3.37e+40	9.82e-13	1	182.962	815.787	h1		1EULX
218	CXOJ125253.777+111341.59	1	NGC4762-X1	0.627	0.57	16.8	1/1	5.86e+39	1.73e-13	1	45.555	114.462	h1		+v 1ULX
219	CXOJ024333.420+012136.83	1	NGC1073-X1	2.004	0.86	15.2	1/1	1.03e+40	3.70e-13	1	69.825	168.743	h1		q pm* +rv 1EULX
219	CXOJ024339.547+012109.40	1	NGC1073-X2	1.459	0.60	15.2	1/1	3.11e+39	1.12e-13	1	23.242	50.386	h1		q pm* +rv 1ULX
221	CXOJ141939.394+564137.82	1	NGC5585-X1	2.512	0.87	7.0	1/1	2.28e+39	3.87e-13	1	97.511	244.478	h1		pm* +v 1ULX
222	CXOJ120921.036+135823.41	1	IC3019-X1	1.174	1.66	24.1	1/1	2.77e+39	3.98e-14	1	10.417	21.598	h1		pm* +v 2ULX
224	CXOJ124713.946+101058.87	1	IC3773-X1	1.302	1.36	14.5	1/1	3.03e+39	1.20e-13	1	32.099	66.595	h1		pm* +v 2ULX
225	CXOJ081929.002+704219.33	1.08	PGC23324-X1	1.972	0.63	4.5	1/1	1.21e+40	4.98e-12	1	375.530	2682.994	h1		1EULX
226	CXOJ023529.093-092512.54	1.36	NGC988-X1	3.629	1.59	18.3	1/1	3.46e+39	8.60e-14	1	15.742	45.239	h1		q pm* +v 2ULX
228	CXOJ100633.962-295617.02	1	NGC3125-X1	0.165	0.44	11.5	1/1	1.16e+40	7.31e-13	1	114.320	378.413	h1		1EULX
230	CXOJ100210.850+720732.52	1	NGC3066-X1	0.141	0.26	32.4	1/1	3.6e+39	2.86e-14	1	4.952	9.794	d1		pm* +v 1ULX
230	CXOJ100216.034+720737.63	1	NGC3066-X2	0.508	1.02	32.4	1/1	2.95e+39	2.34e-14	1	4.123	7.908	d1		2ULX
231	CXOJ124136.785+071856.12	1	NGC4612-X1	0.964	0.93	16.8	1/1	2.57e+39	7.60e-14	1	20.550	43.502	q1		PM*G0 +iv 1ULX
232	CXOJ123728.591+093100.77	1	NGC4578-X1	2.362	1.50	18.54	1/1	3.32e+39	8.05e-14	1	10.543	20.803	h1		+v 2ULX
234	CXOJ122927.792+080630.53	1	NGC4472-X1	8.015	1.58	16.29	1/1	5.51e+39	1.73e-13	1	37.329	90.705	h1		q pm* +rv 2ULX
234	CXOJ122934.766+080932.26	1.02	NGC4472-X2	10.002	1.96	16.29	1/1	3.76e+39	1.18e-13	1	29.351	64.330	h1		+v 2ULX
237	CXOJ023914.347+300854.71	1	NGC1012-X1	0.317	0.26	14.4	1/1	5.72e+39	2.30e-13	1	45.599	110.711	h1		1ULX
239	CXOJ125210.543+111856.81	1	NGC4754-X1	1.759	1.38	16.83	1/1	2.02e+39	5.93e-14	1	14.418	30.505	h1		pm* +v 2ULX
240	CXOJ124955.548+725208.33	1	NGC4750-X2	0.904	0.96	26.1	1/1	6.53e+39	7.99e-14	1	22.215	46.550	h1		1ULX
240	CXOJ125015.883+725138.74	1	NGC4750-X3	1.120	1.14	26.1	1/1	2.21e+39	2.70e-14	1	7.737	15.693	h1		2ULX
243	CXOJ131044.414+370235.02	1	NGC5005-X3	2.519	0.88	21.3	1/1	2.3e+39	4.23e-14	1	9.971	19.782	h1		+v 1ULX
243	CXOJ131113.560+370348.42	1.05	NGC5005-X2	3.478	1.42	21.3	1/1	2.56e+39	4.70e-14	1	10.202	21.519	h1		2ULX
245	CXOJ124408.942+130701.81	1.43	NGC4654-X1	3.051	1.50	16.8	1/1	2.71e+39	8.00e-14	1	15.288	41.753	h1		pm* +v 2ULX
246	CXOJ123410.939+023925.16	1	NGC4527-X1	0.572	0.19	13.5	1/1	6.41e+39	2.93e-13	1	64.063	161.440	h1		pm* +iv 1ULX
246	CXOJ123411.438+023928.84	1	NGC4527-X2	0.710	0.23	13.5	1/1	4.7e+39	2.15e-13	1	51.357	122.814	h1		1ULX
249	CXOJ125512.298+000751.92	1	PGC44014-X1	0.834	0.54	14.2	1/1	2.03e+39	8.40e-14	1	21.542	45.512	h1		pm* +v 1ULX
250	CXOJ143207.646+575531.15	1	NGC5678-X4	0.334	0.38	35.6	1/1	2.62e+39	1.72e-14	1	4.565	9.555	d1		1ULX
250	CXOJ143208.215+575510.34	1	NGC5678-X1	0.449	0.51	35.6	1/1	6.87e+39	4.52e-14	1	10.832	22.575	h1		1ULX
250	CXOJ143212.835+575708.50	1	NGC5678-X2	2.008	1.51	35.6	1/1	4.62e+39	3.04e-14	1	7.931	15.772	h1		2ULX
250	CXOJ143216.116+575530.04	1	NGC5678-X3	1.439	1.76	35.6	1/1	2.72e+39	1.79e-14	1	5.014	9.828	h1		+v 2ULX
251	CXOJ105433.905+565943.62	1	NGC3445-X1	0.439	0.58	32.4	1/1	2.19e+39	1.74e-14	1	3.077	5.905	d1		PM* +v 1ULX
253	CXOJ135315.132+402056.04	1.08	NGC5350-X3	1.506	0.98	37.8	1/1	2.11e+39	1.23e-14	1	2.032	3.902	d1		+v 1ULX
253	CXOJ135324.067+402209.01	1.41	NGC5350-X2	0.586	0.38	37.8	1/1	3.53e+39	2.06e-14	1	2.924	5.790	d1		1ULX
254	CXOJ210333.938+295317.84	1	NGC7013-X1	0.512	0.26	14.2	1/1	6.1e+39	2.52e-13	1	44.742	101.160	h1		1ULX
255	CXOJ110113.663+033615.55	1	NGC3495-X1	1.427	0.59	17.6	1/1	2.36e+39	6.36e-14	1	14.704	29.709	h1		1ULX
256	CXOJ000852.978+154806.48	1.02	NGC14-X1	1.770	1.68	12.8	1/1	2.85e+39	1.45e-13	1	28.355	65.073	h1		pm* +v 2ULX
260	CXOJ123608.902+191955.96	1	NGC4561-X2	0.504	0.68	12.3	1/1	2.36e+39	1.30e-13	1	25.212	53.492	h1		1ULX
266	CXOJ131329.446+363517.45	1	NGC5033-X3	0.449	0.12	15.2	1/1	2.38e+39	8.57e-14	1	17.021	36.447	h1		1ULX

Table 5—Continued

Group No.	CXOJ[a]	Pos. Err.[b]	source Name[c]	α[d] ($'$)	r_{25}[e]	Dis.[f] (Mpc)	V/D[g]	L_{Xmax}[h] (erg/s)	F_{Xavg}[i] (cgs)	F/F[j]	σ_{max}[k]	C_{max}[l]	SQH[m]	Var/KS[n]	Notes[o]
266	CXOJ131329.650+363523.21	1	NGC5033-X2	0.413	0.13	15.2	1/1	3.08e+39	1.11e-13	1	21.589	47.329	h1		1ULX
270	CXOJ125304.538-102905.82	1	NGC4760-X1	0.886	0.91	63.5	1/1	6.24e+40	1.29e-13	1	11.344	22.741	h1		1EULX
273	CXOJ124517.273+270731.87	1	NGC4670-X2	0.071	0.11	11.0	1/1	2.11e+39	1.45e-13	1	18.409	41.215	h1		+iv 1ULX
273	CXOJ124521.900+270755.24	1	NGC4670-X1	1.147	1.65	11.0	1/1	3.83e+39	2.64e-13	1	36.683	77.511	h1		pm* +v 2ULX
275	CXOJ080148.106+504354.62	1	NGC2500-X1	0.952	0.72	10.1	1/1	5.09e+39	4.16e-13	1	49.618	108.349	h1		1ULX
276	CXOJ094414.285-211431.96	1	NGC2986-X1	2.217	1.57	32.3	1/1	2.05e+40	1.64e-13	1	18.723	39.517	q1		pm* +iv 2EULX
276	CXOJ094427.209-211611.82	1	NGC2986-X2	2.591	1.69	32.3	1/1	6.07e+39	4.85e-14	1	6.036	11.829	h1		+r 2ULX
277	CXOJ102326.702+195406.77	1	NGC3226-X2	0.255	0.17	23.55	1/1	2.58e+39	3.87e-14	1	6.107	12.614	h1		1ULX
279	CXOJ022721.516+333500.78	1	NGC925-X2	1.036	0.25	9.12	1/1	4.21e+39	4.22e-13	1	41.075	89.368	h1		1ULX
279	CXOJ022727.528+333442.92	1	NGC925-X1	2.235	0.45	9.12	1/1	2.1e+40	2.10e-12	1	118.211	435.544	h1		1EULX
283	CXOJ211900.838-483348.46	1	NGC7049-X2	0.092	0.04	29.92	1/1	4.61e+39	4.29e-14	1	3.206	6.618	d1		1ULX
285	CXOJ101417.890+032855.42	1	NGC3169-X2	1.176	0.54	19.7	1/1	2.27e+39	4.88e-14	1	5.959	11.792	h1		1ULX
286	CXOJ175552.762+182035.38	1	NGC6500-X4	1.488	1.63	40.0	1/1	4.05e+39	2.11e-14	1	2.521	4.877	d1		2ULX
286	CXOJ175556.441+181910.63	1	NGC6500-X3	1.395	1.36	40.0	1/1	4.24e+39	2.21e-14	1	2.499	4.859	d1		PM* +v 2ULX
286	CXOJ175601.570+182022.60	1	NGC6500-X2	0.613	0.67	40.0	1/1	5.8e+39	3.02e-14	1	3.627	6.924	d1		1ULX
287	CXOJ123527.770+121339.00	1	NGC4550-X1	0.848	1.62	15.85	1/1	5.91e+39	1.96e-13	1	23.307	51.307	h1		q pm* +riv 2ULX
288	CXOJ122811.690+283837.25	1	NGC4448-X1	1.617	1.91	9.7	1/1	3.2e+39	2.83e-13	1	29.950	68.125	h1		pm* +iv 2ULX
288	CXOJ122826.806+283958.57	1.73	PGC41014-X1	0.558	1.39	59.4	1/1	1.23e+40	2.91e-14	1	3.232	6.638	d1		PM* +v 2EULX
292	CXOJ081436.982+490326.10	1	NGC2541-X1	0.620	0.38	11.27	1/1	3.6e+39	2.36e-13	1	23.613	49.544	h1		1ULX
295	CXOJ105220.429+363603.74	1	NGC3432-X1	2.431	1.57	12.7	1/1	3.58e+39	1.85e-13	1	20.150	43.417	h1		+v 2ULX
295	CXOJ105233.878+363615.88	1	NGC3432-X2	1.011	1.28	12.7	1/1	3.5e+39	1.81e-13	1	19.505	42.375	h1		+v 2ULX
301	CXOJ121509.199+330954.58	1	NGC4203-X1	2.136	1.29	15.14	1/1	4.4e+40	1.60e-12	1	126.173	352.531	h1		q +iv 2EULX
302	CXOJ112020.894+125846.02	1	NGC3627-X1	1.605	0.67	8.75	1/1	5.69e+39	6.19e-13	1	52.780	134.361	h1		1ULX
304	CXOJ112607.334+433406.31	1	NGC3675-X1	0.998	0.35	16.1	1/1	2.12e+39	6.81e-14	1	6.456	14.999	h1		1ULX
306	CXOJ121033.758+302357.95	1	NGC4150-X2	0.145	0.13	13.74	1/1	4.96e+39	2.19e-13	1	23.559	53.170	h1		1ULX
306	CXOJ121034.764+302358.31	1	NGC4150-X1	0.301	0.29	13.74	1/1	9.9e+39	4.37e-13	1	41.760	106.357	h1		1ULX
311	CXOJ140459.736+533808.95	1	NGC5474-X1	1.671	0.70	6.0	1/1	4.17e+39	9.66e-13	1	69.906	185.992	h1		1ULX
313	CXOJ111858.543+130530.91	1	NGC3623-X1	0.792	0.54	12.3	1/1	2.27e+39	1.25e-13	1	15.011	29.782	h1		1ULX
320	CXOJ124251.211+131439.95	1	NGC4639-X2	0.900	0.96	20.8	1/1	2.04e+39	3.93e-14	1	4.079	7.881	d1		1ULX

[a]source names composed from their positions following CXO naming conventions.

[b]source positional uncertainties in arcsec computed from the scheme of Kim et al. (2004).

[c]galactic source names numbered sequentially by its maximum luminosity.

[d]galactic source nuclear separation in arcminutes.

[e]galactic source nuclear separation in unit of the elliptical radius.

[f]distance in Mpc for the source.

[g]numbers the source was observed/detected.

[h]maximum luminosity in erg s^{-1} computed from detections.

[i]average flux in erg s^{-1} cm^{-2} computed from detections.

[j]F_{max}/F_{min} ratio as an extreme variability indicator.

[k]the maximum detection significance.

[l]the maximum photon counts from detections.

[m]statistics for supersoft/quasisoft/hard/dim phases. For example, s2 means supersoft in two observations, q3 means quasisoft in three observations, h4 means hard in four observations, and d1 means

too dim (below 10 counts) in one observations.

[n]statistics for variability within single observations by the K-S criterion. For example, v/3 means the source was variable by the K-S criterion (i.e., $P_{KS} < 0.01$) in three observations.

[o]source identification. ULX: ultraluminous X-ray sources, ULS: ultraluminous supersoft sources, (NGC3031): the galactic nucleus for NGC1313.